1989-12

Cost effectiveness of civilian-run outpatient clinics in the Naval Hospital Oakland and Silas B. Hayes Army Community Hospital catchment areas

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THESIS

COST EFFECTIVENESS OF CIVILIAN-RUN OUTPATIENT CLINICS IN THE NAVAL HOSPITAL OAKLAND AND SILAS B. HAYS ARMY COMMUNITY HOSPITAL CATCHMENT AREAS

by

Margaret Galbiati Hodun
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December 1989

Thesis Advisor: Shu S. Liao

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UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved
OMB No 0704-0188

1a REPORT SECURITY CLASSIFICATION
UNCLASSIFIED

1b RESTRICTIVE MARKINGS

2a SECURITY CLASSIFICATION AUTHORITY

3 DISTRIBUTION / AVAILABILITY OF REPORT
Approved for public release; distribution is unlimited.

2b DECLASSIFICATION / DOWNGRADING SCHEDULE

4 PERFORMING ORGANIZATION REPORT NUMBER(S)

5 MONITORING ORGANIZATION REPORT NUMBER(S)

6a NAME OF PERFORMING ORGANIZATION
Naval Postgraduate School

6b OFFICE SYMBOL (If applicable)
36

7a NAME OF MONITORING ORGANIZATION
Naval Postgraduate School

6c. ADDRESS (City, State, and ZIP Code)
Monterey, CA 93943-5000

7b ADDRESS (City, State, and ZIP Code)
Monterey, CA 93943-5000

8a NAME OF FUNDING / SPONSORING ORGANIZATION

8b OFFICE SYMBOL (If applicable)

9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c. ADDRESS (City, State, and ZIP Code)

10 SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO	PROJECT NO	TASK NO	WORK UNIT ACCESSION NO

11. TITLE (Include Security Classification) COST EFFECTIVENESS OF CIVILIAN-RUN OUTPATIENT CLINICS IN THE NAVAL HOSPITAL OAKLAND AND SILAS B. HAYS ARMY COMMUNITY HOSPITAL CATCHMENT AREAS.

12 PERSONAL AUTHOR(S) Hodun, Margaret G.
Wood, Edward J.

13a TYPE OF REPORT	13b TIME COVERED FROM _____ TO _____	14 DATE OF REPORT (Year, Month, Day)	15 PAGE COUNT
Master's Thesis		December 1989	176

16 SUPPLEMENTARY NOTATION The views expressed in this thesis are those of the authors and do not reflect the official policy or position of the Department of Defense or the Unites States Government.

17 COSATI CODES		
FIELD	GROUP	SUB-GROUP

18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
Cost Effectiveness, Medical clinics, NAVCARE, Civilian-Run Outpatient Clinics, PRIMUS

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

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20 DISTRIBUTION / AVAILABILITY OF ABSTRACT
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS

21 ABSTRACT SECURITY CLASSIFICATION
Unclassified

22a NAME OF RESPONSIBLE INDIVIDUAL
Shu S. Liao

22b TELEPHONE (Include Area Code)

22c OFFICE SYMBOL
54Lc

DD Form 1473, JUN 86 Previous editions are obsolete.
S/N 0102-LF-014-6603

SECURITY CLASSIFICATION OF THIS PAGE
Unclassified

Approved for public release; distribution is unlimited.

Cost Effectiveness of Civilian-Run Outpatient Clinics In the Naval Hospital Oakland and Silas B. Hays Army Community Hospital Catchment Areas

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MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December 1989

ABSTRACT

Rising health care costs coupled with ever increasing CHAMPUS use have spawned the creation of a number of corrective programs. The civilian-run outpatient clinics (NAVCARE in the Navy, PRIMUS in the Army) are one such effort to curb health care costs by contracting outpatient services to private corporations. It is hoped that these clinics will attract patients away from the CHAMPUS program by offering a wide range of free primary and preventive care services to dependents and retirees. This thesis will examine the civilian-run outpatient clinics in the Naval Hospital Oakland and Silas B. Hays Army Community Hospital catchment areas to evaluate their success in expanding availability of services while maintaining a cost effective edge over Military Treatment Facilities and CHAMPUS.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

I. INTRODUCTION

This thesis will provide an evaluation of the cost effectiveness of civilian-run outpatient clinics [Navy Cares (NAVCARE)/Primary Medical Care for the Uniformed Services (PRIMUS)] in the San Francisco/Monterey Bay Areas, as compared to alternative health care delivery options.

A. THE ISSUE OF RISING MILITARY HEALTH CARE COSTS

Military treatment facilities (MTFs) provide "free" health care to its beneficiaries and consequently are subject to overutilization. Budgetary restrictions imposed on MTFs in recent years have created shortages of staff, resources and services available to beneficiaries. The result has been a 405 percent increase in Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) costs between 1979 and 1987. Civilian-run Outpatient Clinics (CROCs) were created as one weapon in the fight against escalating health care costs for beneficiaries. CROCs have existed since fiscal year (FY) 1986, when the Army opened four. [Ref. 1:p. 78] There are currently 23 operating PRIMUS and NAVCARE clinics, and as of July 1989, DOD had intentions of increasing that number to 57 by the end of FY92. [Ref. 2:p. i]

Due to the short period of time that CROCs have been in existence, the issue of their cost effectiveness has not been subjected to extensive analysis. The only known data previously collected to study the cost effectiveness of CROCs was for a tentative evaluation by the Congressional Budget Office in January 1988. [Ref. 1:p. 77] Two other recent reports dealt with this subject in varying degrees. An article in "Military Medicine" [Ref. 3:p. 396] concluded that, although successful in achieving many of their goals, the high cost of CROCs threaten their existence. The author recommends expansion of the military health care system to reduce use of such programs as CHAMPUS, NAVCARE and PRIMUS. A Department of Defense (DOD) Inspector General draft report [Ref. 2:p 31] found that NAVCARE/PRIMUS were more costly than both MTFs facilities and CHAMPUS. Unfortunately, the study looked only at the first four months of operation of NAVCARE (Oakland) and PRIMUS (Salinas), and amortized the clinic start-up costs over that short period. Additionally, the first three months of the NAVCARE Oakland contract occurred in the fourth quarter, FY88. When the contract was renewed for FY89, the contract price for a full visit dropped from $102.55 to $74.38. Further study is warranted, as the primary growth in the Navy's direct patient care budget is in health care contracts.

B. OBJECTIVES OF THE STUDY

The overall research objective is to determine the cost effectiveness of the CROCs, considering the role of the military health care system. Specific questions the thesis will attempt to answer are:

1. Have the CROCs provided a cost saving alternative to CHAMPUS and MTFs? Inpatient and primary care outpatient services will be evaluated.

2. Have the CROCs increased the availability of care for beneficiaries?

3. Has the increased availability of care created a higher demand for health care services? Has the increased demand offset the increased availability?

4. Who are the primary users of CROCs?

5. What are primary users' of CROCs prior and current health care usage patterns (ex. MTFs, CHAMPUS, CHAMPUS Reform Initiative programs, private insurance coverage)?

6. Have the CROCs attracted beneficiaries from CHAMPUS, MTFs, or ghost population (ex. private insurance, no insurance, Medicare)?

7. How have beneficiaries responded to the CROCs? Are they satisfied with availability of services, clinic locations, timeliness of service, etc.?

Areas addressing the research questions are as follows:

1. Costs involved with the various health care alternatives.

2. Availability of care.

3. Stability of the patient population in the catchment area.

4. Trends in outpatient visits at NAVCARE vs NAVHOSP Oakland and PRIMUS vs Silas B. Hays Army Community Hospital, Fort Ord (SBHACH).

5. Trends in hospital admissions at NAVHOSP Oakland, SBHACH and those covered by CHAMPUS.

6. Patient attitudes and utilization of CROCs.

7. CHAMPUS cost data for the two catchment areas.

D. RESEARCH METHODOLOGY

A determination of cost effectiveness for the CROCs is composed of data from many sources. A complex network of health care sources is available to service members and their beneficiaries, and each one presumedly has some impact on the others. We intend to research cost and patient utilization statistics from the MTFs, CHAMPUS, and CROCs. Specifically, the data required for this study will be obtained from the following sources:

1. Workload and cost data at the NAVCARE/ PRIMUS clinics in the San Francisco/Monterey Bay areas for FY89.

2. MEPRS data at NAVHOSP Oakland and SBHACH, Fort Ord for FY86-FY89.

3. CHAMPUS workload and cost data from the Office of CHAMPUS (OCHAMPUS) for FY86-FY88.

4. Patient Exit Interview developed by the authors.

We will determine if MTF outpatient visits have increased/decreased in relation to catchment area population base since opening of the CROCs. This will demonstrate if CROCs are effective in alleviating congestion in MTFs. We will also determine if MTF admissions have increased or

decreased in relation to catchment area population since opening of the CROCs.

We will identify the primary users of the NAVCARE/PRIMUS clinics. Have CROCs reduced their usage of MTFs/CHAMPUS? Have CROCs drawn out of hiding additional "ghost" patients - those who previously used private insurance (or other sources) vice MTFs or CHAMPUS.

Although largely subjective in nature, we will attempt to determine patient satisfaction with the CROCs. If beneficiaries are unsatisfied with availability of services, timeliness of services, etc., then cost effectiveness is moot. Clinic users will eventually drift back to MTFs and CHAMPUS for treatment.

Through data compiled by patient questionnaire, CHAMPUS statistics, MTF and CROC workload, and subsequent costs, we will construct a spreadsheet model to simulate health care costs and workload under various patient utilization scenarios.

II. OVERVIEW OF THE MILITARY HEALTH CARE SYSTEM

This chapter will provide an overview of the military health care system. Topics discussed will include: beneficiaries, the military treatment facility (MTF), the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), and other health care outside the MTF.

A. BENEFICIARIES

There are eight million people in the United States who are entitled to care in the military health care system. These beneficiaries consist of 23 percent active duty, 27.5 percent dependents of active duty, and 49.5 percent military retirees and their dependents [Ref. 1:p. 9]. Military retirees and their dependents is the fastest growing group [Ref. 1:p. 9]. In addition, the number of active duty dependents has risen as the number of married enlisted fleet members increased from 40.8 percent in 1981 to 47.4 percent in 1985 [Ref. 4:p. 1].

Care is provided through the MTF which may consist of a free-standing clinic, or a free-standing clinic and a hospital. When care is not available at the MTF, the non-active duty beneficiary seeks health care in the civilian sector using the Civilian Health and Medical Program of the

Uniformed Services (CHAMPUS), the health care insurance of the military, or private insurance.

The MTF provides care to beneficiaries in the following order: (1) active duty military; (2) dependents of active duty; (3) members of the Reserve Officers' Training Corps; (4) military retirees and their dependents [Ref. 1:p. 11]. Though the order of care is delegated, in many cases it is provided on a first come first served basis [Ref. 5: p. 53]. Some MTFs have had to limit care, where they do not provide service for military retirees and their dependents.

Beneficiaries utilizing the military health care system are classified into six categories. They are as follows [Ref. 6:p. 30]:

1. Active duty member. The active duty member must use the MTF, except in emergency situations.

2. MTF-Reliant. The beneficiary only uses the MTF for health care.

3. Civilian-Reliant. The beneficiary only uses civilian health care.

4. MTF-Preference Crossover. The beneficiary uses both the MTF and civilian health care. The MTF is their usual source of health care.

5. Civilian-Preference Crossover. The beneficiary uses both the MTF and civilian health care. The civilian health care system is their usual source of medical care.

6. Infrequent Users. People who do not normally use health care and do not specify a usual source.

B. THE MILITARY TREATMENT FACILITY

In the military health care system there are 129 hospitals and 350 free-standing clinics [Ref. 1:pp. 6-7]. The military treatment facility (MTF) offers a unique health care system for outpatient care, in that it is similar to one stop shopping for medical needs. A free-standing clinic may offer Sick Call, Internal Medicine, Obstetrics/Gynecology, Otolaryngology, Ophthalmology, Pediatrics, Family Practice, and Cardiology, to name a few. In addition, the outpatient clinics provide support services, such as Radiology, Laboratory, and Pharmacy. The civilian sector may offer these services in one spot, however, the beneficiary generally has to go to various locations to receive health care.

The MTF averages seven outpatient visits per year per active duty dependent, compared to the civilian sector which averages five outpatient visits per year per person. The MTF hospitals had 21.4 million outpatient visits and free-standing clinics had 4.35 million outpatient visits in 1985 [Ref. 1:p. 7]. In the MTF hospitals, 83 percent of its care is outpatient, compared to 10 percent in the civilian sector [Ref. 1:p. 8].

As with any organization, the MTFs are plagued by scarce fiscal and personnel resources. Rising health care costs and an ever growing beneficiary population place the MTF in a difficult situation. Their primary mission, providing

health care to eligible beneficiaries, is jeopardized due to the constraints of scarce resources and high costs. Many people are not able to get into the system due to limited availability of appointments and restricted services. As discussed in a recent issue of Military Medicine [Ref. 3:p. 394], three approaches are being considered to heal the ailing health care system: (1) Increasing the efficiency of military care providers, (2) decreasing patient demand for services, and (3) shifting workload to the civilian sector.

C. CIVILIAN HEALTH AND MEDICAL PROGRAM OF THE UNIFORMED SERVICES (CHAMPUS)

CHAMPUS was officially established in 1966 as a supplement to medical care provided by MTFs. It is intended to provide both inpatient and outpatient care on a cost sharing basis to active duty dependents, retirees and their dependents, and survivors. The need for a health care program to supplement the existing military network is unequivocal, because:

1. Within a given catchment area (40 mile radius around an MTF), a particular service may not be available at the local MTF, or have restricted availability.
2. Beneficiaries living outside the catchment area cannot realistically be expected to travel over 40 miles for routine health care.

1. Prior Studies

CHAMPUS has often been the focus of controversy, especially in recent cost-conscious years. It has consistently come under attack as a ponderous, ineffective money funnel. Over the years, many studies have indicated the need for overhaul of the system. In 1975, a Department of Defense (DOD) report found the following:

1. Ineffective utilization of CHAMPUS, filling a role of a substitute for, rather than a supplement to direct care [Ref. 7:p. 85].

2. The existing structure did not assure optimum allocation of resources at local levels [Ref. 7:p. 86].

3. Inefficient programming and planning of non-CHAMPUS direct care resulted in substantial over or under estimates of CHAMPUS requirements. As a result, between $37.5 and $85.7 million had to be reprogrammed in or out of CHAMPUS between 1972 and 1975 [Ref. 7:p. 41].

4. The non-availability of CHAMPUS data and non-compatibility with other DOD information systems hindered planning and management [Ref. 7:p. 47].

5. CHAMPUS inpatient care was more expensive than 53 to 74 percent of all DOD facilities, when calculated by occupied bed days [Ref. 7:p. 60].

6. CHAMPUS outpatient care was more expensive than 86 to 88 percent of all DOD facilities [Ref. 7:p. 60].

In 1988, The Rand Corporation conducted a study to determine the feasibility and desirability of a health enrollment system (HES). They noted:

1. CHAMPUS's very structure prevents MTF commanders from determining patient population at any one time. Outside the catchment area, beneficiaries are free to utilize either the MTF or CHAMPUS. Within the catchment area, outpatient care is similarly unrestricted, while civilian inpatient care requires

a certificate of non-availability. Additionally, some beneficiaries use neither the MTF nor CHAMPUS, but rely on private insurance. [Ref. 6:pp. v and 2] Finally, there exists a pool of potential patients who sharply limit their medical visits to avoid CHAMPUS/insurance costs, or MTF inconveniences. Any of these categories of patients could at any time "cross-over" into another category, effectively confounding planning efforts.

2. The current system does not provide equity of benefits among all beneficiaries. Non-active patients may only utilize an MTF on a space-available basis, and patients outside the catchment area are realistically restricted to CHAMPUS. Thus, the minimum standard of coverage is the range of benefits provided by CHAMPUS. Beneficiaries able to utilize an MTF incur less personal expenses, and have a wider range of services available to them, as they may use both the MTF and CHAMPUS [Ref. 6:p. 42].

3. The structure of CHAMPUS allows MTF commanders to shift non-active patients to CHAMPUS in order to conserve scarce local funds. The Rand report does not portray this practice in a negative light, but as one of the original design intents of the program [Ref. 6:p. 68].

4. The study felt that conversion of the military health care system to an HES could be beneficial and further study was warranted [Ref. 6:p. 95]. Such a conversion could result in an end to CHAMPUS in its current form.

The Congressional Budget Office conducted the most recent study available, and it portrays a CHAMPUS system similar to the two prior studies. It found:

1. Greater numbers of non-active beneficiaries are forced to utilize CHAMPUS due to shortages of staff and resources in the MTFs. This results in higher cost for the beneficiaries (CHAMPUS co-payments), and declining patient load at the MTFs. The decrease in workload may trigger decreases in staffing, with a resultant degradation in wartime readiness [Ref. 1:p. xiii].

2. Since CHAMPUS costs are generally higher than MTF costs, the short-term benefits of shifting patients

to CHAMPUS are eventually overshadowed. The net effect is an overall increase in the cost of the medical system as a whole, albeit from different "pots" of money [Ref. 1:p. 3].

3. A statistical link exists between MTF admissions and CHAMPUS admissions. Decreases in MTF admissions were accompanied by increases in CHAMPUS admissions of an even greater degree [Ref. 1:p. 19].

4. Beginning in 1975, CHAMPUS funds were centrally managed by the Assistant Secretary of Defense for Health Affairs (ASDHA). Since CHAMPUS funding was totally separate from MTF funding, there was little incentive to curtail its use. Budget crunches resulting in scarce resources and limitation of services proved to be the nemesis of this system as increasing "disengagements" triggered a sharp increase in CHAMPUS costs. Beginning in fiscal year 1989, oversight of CHAMPUS funding was transferred from ASDHA directly to the services [Ref. 1:pp. 22-23].

5. CHAMPUS costs are staggering despite the fact that about 40 percent of MTF bed capacity is non-operational (1985) [Ref. 1:p. 23].

6. Many beneficiaries purchase supplemental insurance to eliminate CHAMPUS co-payments, protecting themselves against potentially high medical bills. As a consequence, a major deterrent to CHAMPUS use is diminished [Ref. 1:pp. 28-29].

7. Surveys in 1984 and 1985 indicated that many beneficiaries would be willing to forego a portion of their benefits in return for an improved system. In the 1984 survey, 75 percent were willing to pay $5.00 per MTF outpatient visit in exchange for increased CHAMPUS benefits (i.e. dental care). The 1985 survey stated that 36 to 47 percent of the respondents would prefer membership in a Health Maintenance Organization (HMO) to CHAMPUS [Ref. 1:p. 34].

2. Beneficiary Population

Based on an interpretation of statistics from sources depicted in Table 2-1, the CHAMPUS-eligible beneficiary population actually decreased by 13.2 percent

between 1975 and 1988, and is not expected to surpass the 1975 level by 1992, as illustrated in Figure 2-1.

TABLE 2-1 Non-Active Beneficiary Population
(millions)

Fiscal Year	# of Beneficiaries
1955 *	3.5745
1965 *	5.7015
1975 *	6.8117
1984 **	6.3326
1985 ***	6.2720
1986 ***	6.2950
1987 ***	5.8140
1988 ***	5.9160
1992 ****	6.4080

Source

* [Ref. 7:p. 25]
** [Ref. 6:p. 2]
*** [Ref. 8:p. V-17]
**** [Ref. 1:p. 10]

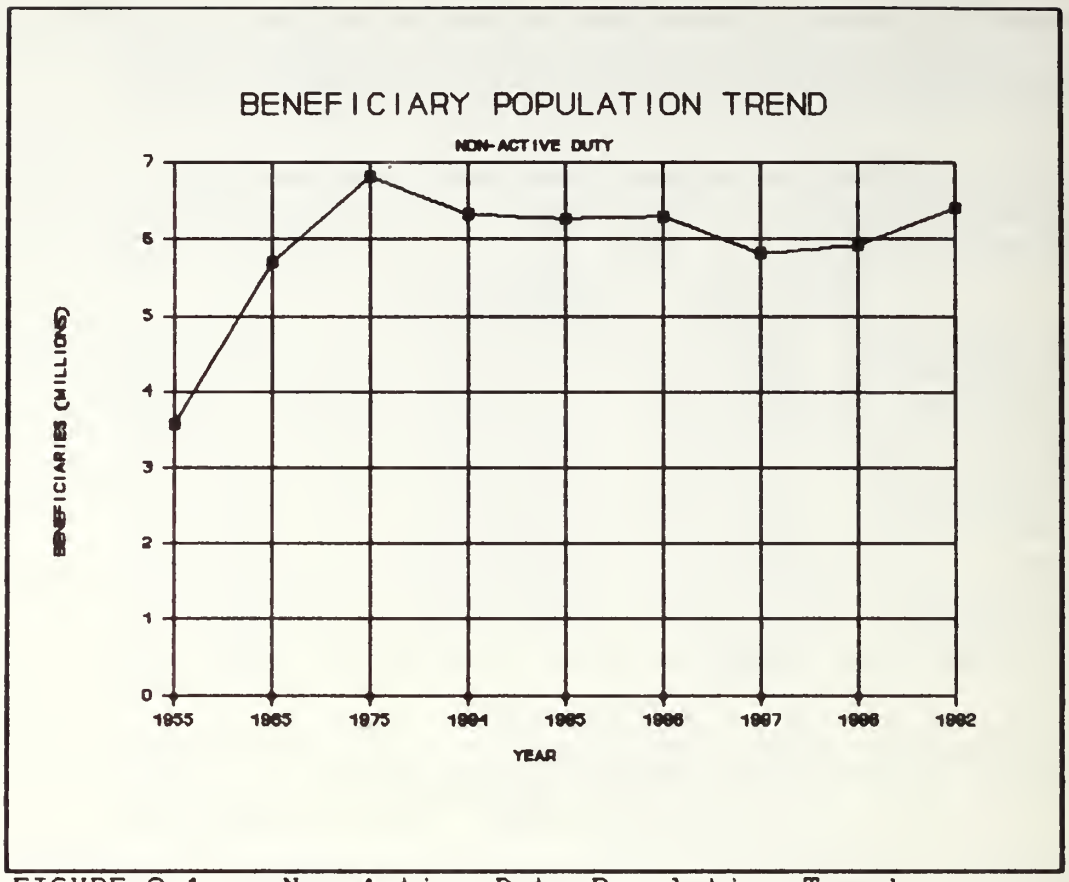

FIGURE 2-1 Non-Active Duty Population Trend

Retirees and their dependents comprise the majority of beneficiaries, approximately 49.5 percent. Active duty dependents total 27.5 percent, and active duty personnel complete the picture at 23 percent [Ref. 1:p. 9]. Most non-active beneficiaries (about 77 percent) live within MTF catchment areas [Ref. 1:p. 11]. The MTFs dominate non-active inpatient care within patient areas, absorbing 78.2 percent of the admissions. Conversely, CHAMPUS is responsible for 79.9 percent of the admissions from outside the catchment areas [Ref. 1:pp. 11-13]. From a slightly

different perspective, the 25 percent of the non-active population which resides outside catchment areas accounts for almost half of all CHAMPUS admissions [Ref. 1:p. 13]. From 1982 to 1986, the percentage of CHAMPUS admissions to total admissions increased from 23 percent to over 36 percent and the percentage of outpatient visits increased from 7.18 percent to 18.81 percent, as shown in Table 2-2.

TABLE 2-2 MTF vs CHAMPUS Admissions and Outpatient Visits
(Non-Active Duty)

Admissions (Thousands)				OPV (Millions)		
Year	MTF	CHAMPUS	CHAMPUS % OF TOTAL	MTF	CHAMPUS	CHAMPUS % OF TOTAL
1982*	523.858	153.181	22.63%	26.479	2.049	7.18%
1985**	594.000	288.400	32.68%	26.468	4.926	15.69%
1986**	551.000	315.000	36.37%	25.365	5.876	18.81%

SOURCE
* [Ref. 6:pp.134-135, pp. 137-138]
** [Ref. 1:p.4]

3. Costs

Table 2-3 depicts a comparison of MTF and CHAMPUS costs. MTF health care costs more than doubled between 1979 and 1987, more or less keeping pace with the civilian sector. On the other hand, CHAMPUS costs rose by 405 percent between 1979 and 1984, but have been relatively stable since 1984 when viewed as a percentage of total costs, as illustrated in Figure 2-2.

TABLE 2-3 MTF vs CHAMPUS Costs (Billions)

Year		MTF	CHAMPUS	CHAMPUS % OF TOTAL
1975	*	1.546	0.551	26.28%
1979	**	4.100	0.485	10.58%
1982	***	5.843	1.089	15.71%
1983	***	5.861	1.191	16.88%
1984	***	5.934	1.254	17.45%
1985	***	7.841	1.371	14.89%
1986	***	8.651	1.735	16.71%
1987	***	9.532	1.964	17.08%

SOURCE

* [Ref. 7:p. 56]
** [Ref. 1:p. 1]
*** [Ref. 8:p. II-9]

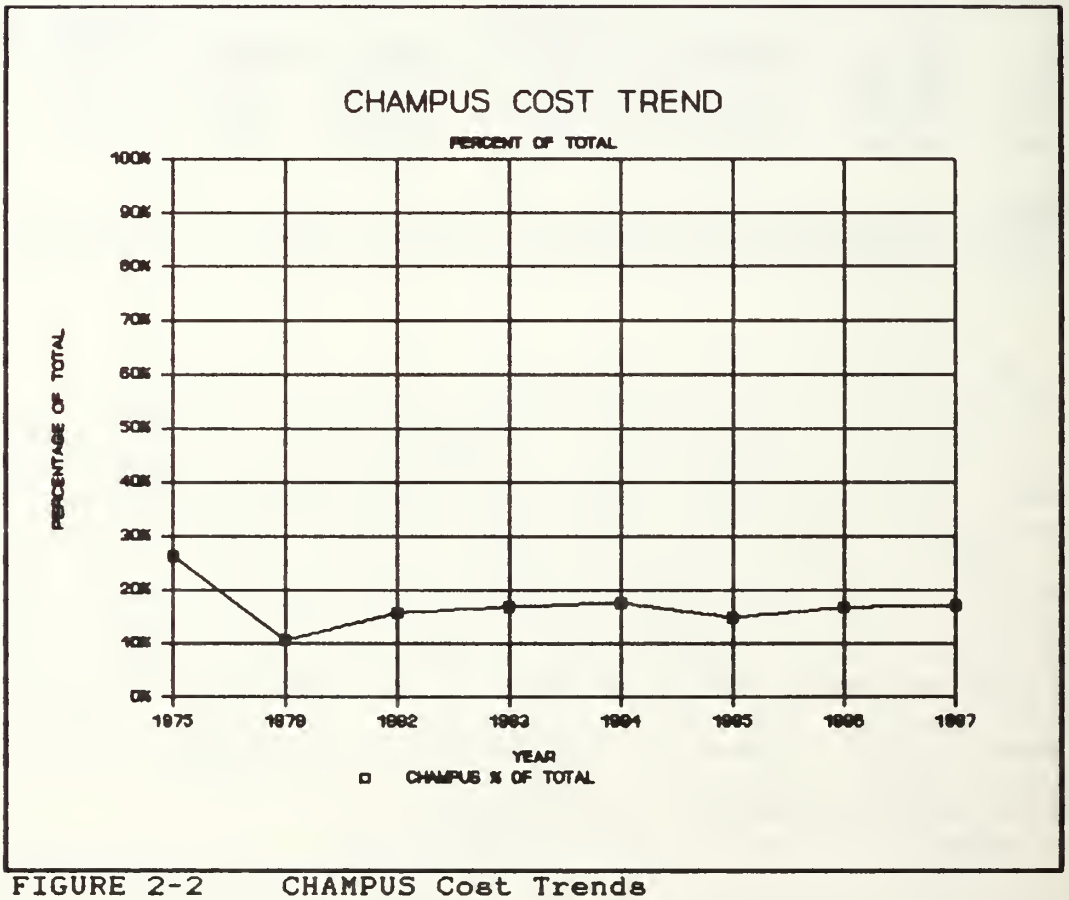

FIGURE 2-2 CHAMPUS Cost Trends

The unpredictability of CHAMPUS, coupled with rapid growth since 1982, has frequently necessitated reprogramming of funds. CHAMPUS shortfalls have been significant in recent years. In 1987, CHAMPUS was underbudgeted by $540 million, of which $115 million was "rolled over" to fiscal year 1988 [Ref. 1:pp. 1-3]. Table 2-4 shows the extent of reprogramming in selected years:

TABLE 2-4 CHAMPUS Reprogramming
(million dollars)

Fiscal Year	Into CHAMPUS	Out of CHAMPUS
1972*	85.7	
1973*	---	77.1
1974*	---	37.5
1975*	75.0	
1982**	105.0	
1986**	360.0	
1987**	425.0***	

* [Ref. 7:p. 41]
** [Ref. 1:pp. 1-3]
*** Still a shortfall by $115 million.

4. CHAMPUS Reform Initiative (CRI)

The latest weapon in the fight against escalating medical costs is the CHAMPUS Reform Initiative (CRI). The central program in CRI appears to be CHAMPUS Prime, a preferred provider organization (PPO) which allows enrolled beneficiaries to obtain care from a network of physicians for a modest fee, or continue to seek care on a space available basis at any MTF.

CRI has had an inauspicious start. In 1987, DOD sought bids for CRI in 3 geographic areas: California and Hawaii; Florida and Georgia; and North and South Carolina [Ref. 1:p. 54]. The only potential contractor remaining after the dust cleared was Foundation Health Corporation for the California and Hawaii region. Through CRI, DOD will enter into fixed price contracts with civilian health care organizations, and through a combination of resource sharing and/or PPOs. They hope to save up to $200 million a year over the conventional CHAMPUS program [Ref. 1:p. 35]. Prediction of success is difficult due to the wide range of possible savings or cost increases:

a. "Crossover" Savings

There exists a pool of beneficiaries who obtain outpatient care from both CHAMPUS and military sources. This group's preferences are borderline, and could go either way. If all such crossover beneficiaries select CHAMPUS Prime, savings of up to $590 million could be realized from a combination of conventional CHAMPUS savings and a decline of up to 40 percent in MTF outpatient workload [Ref. 1:pp. xiv-xv].

b. Potential Cost Increases

As out-of-pocket expenses decline and health care becomes more accessible, beneficiaries who normally go outside both military and CHAMPUS for their health care may

return to the military health care system. Not only will this increase the workload of the military health care system, but this legion of "ghost" beneficiaries may decide to cancel their private insurance entirely. This could potentially cause military health care costs to rise by as much as $1.2 billion per year [Ref. 1:pp. xiv-xv]. As an example of the effects of the "ghost" population, CHAMPUS conducted tests with health maintenance organizations (HMOs) in Portland, Oregon; Minneapolis-St. Paul, Minnesota; Houston, Texas [Ref. 9:p. 16]. In these cases, the HMOs were expected to be less expensive than CHAMPUS, but the costs remained about the same [Ref. 9:p 16]. The reason given was that the service attracted people who did not normally use CHAMPUS, ostensibly the "ghosts."

The CHAMPUS Prime contract was let to Foundation Health Corporation in January 1988, and since August 1988, dependents and retirees in selected sites in California and Hawaii have had the option to join [Ref. 10:p. 14]. It appears that the program succeeds in cutting beneficiary medical costs, as the charge for a one-time visit and most other co-payments is only $5.00, and there is no annual deductible [Ref. 11]. As this program is in its infancy, it is impossible to accurately predict if the sought after cost savings will be realized. In fact, some say it may take years to determine the full impact.

D. OTHER HEALTH CARE OUTSIDE THE MILITARY TREATMENT FACILITY

The military has considered various alternatives of offering health care outside the MTF. The ones that will be discussed are: HMOs, PPOs, special arrangements between the MTF and the civilian sector, and civilian-run outpatient clinics (CROCs).

1. Health Maintenance Organizations (HMOs)

An HMO is a group of physicians, nurses, and other specialists which provides health care to enrolled members. Enrolled members pay fixed monthly rates.

The military has considered HMOs as alternatives for health care delivery. One option was to allow the MTF commander to contract with HMOs for health care services in his area. The HMO would theoretically provide more cost effective and efficient health care.

2. Preferred Provider Organizations (PPOs)

PPOs are hospitals, clinics or health care providers that contract with large organizations to provide health care at a fixed rate, which are generally below the market rate [Ref. 12:p. 10].

The non-active duty beneficiary may have to pay a nominal fee [Ref. 13]. The fee would be less than the co-payment of CHAMPUS, which would make it attractive to beneficiaries. Another attraction is providing preventive

care which is not offered under CHAMPUS. The effect would be to provide outpatient care to beneficiaries, with emphasis on decreasing CHAMPUS costs.

In the Tidewater area of Virginia, a contract has been established with a PPO for mental health services. Experience with PPOs have shown a potential savings of 10 to 20 percent, which would result in reducing CHAMPUS costs.

3. Special Arrangements Between the Military Treatment Facility and the Civilian Sector

Some small hospitals have been converted to outpatient facilities. Arrangements have been made with the civilian sector for inpatient care, with military physicians having full privileges to maintain their ability to deliver hospital care [Ref. 1:p. 87]. It is estimated that the military could save $3.9 million by converting the smaller hospitals to outpatient facilities [Ref. 14:p. 42]. Also, it is estimated to reduce CHAMPUS outpatient costs by $45 million [Ref. 1:p. 88]. By closing these facilities, health care personnel could be reassigned where there is a greater demand.

The goal of the special arrangement is to decrease health care costs and increase availability. However, in this case it is in the opposite direction of the CROCs. The CROCs provide outpatient services, decreasing outpatient services and increasing inpatient services at the MTF. The special arrangement has the MTF providing outpatient

services, increasing outpatient services at the MTF and decreasing the inpatient services.

4. Civilian-Run Outpatient Clinics (CROCs)

CROCs provide routine medical care, which includes services for radiology, laboratory and pharmacy. The clinics were designed to improve the quality, efficiency, convenience, and cost-effectiveness of providing health care services [Ref. 2:p. 15]. The military contracts with a civilian health care organization to provide health care to eligible beneficiaries. Under the terms of the contract, they provide personnel, supplies, and sometimes facilities and equipment.

The Army started the first civilian-run outpatient clinic in 1986, called "Primary Medical Care for the Uniformed Services" (PRIMUS) 1:p. 78]. PRIMUS offers some specialists, such as pediatricians, gynecologists, radiologists, orthopedic surgeons, and family practice physicians [Ref. 15:p. 8]. The Navy equivalent, Navy Cares (NAVCARE), utilizes family practitioners [Ref. 15:p. 8]. Some CROCs have been created to supplement the MTF, such as NAVCARE in Oakland, California. Others have replaced military operated clinics, such as PRIMUS (Presidio), in Monterey, California.

The civilian contractor is paid a fixed fee per visit [Ref. 16:p. 44]. The cost per visit varies with the

type of contract and the location. It is felt that the CROCs are more cost effective than outpatient visits at the MTF, which has a high fixed cost [Ref. 15:p. 8]. The MTF may consider the CROCs as a "safety-valve" and decrease their outpatient care, devoting their resources to inpatient care [Ref. 1:p. 84]. The CROCs costs would increase due to demand, however, there should be a decrease in CHAMPUS costs.

The demand for health care will effect the cost of the CROC. The beneficiary may turn to the CROC for health care which they can access, when they find it difficult to make an appointment at the MTF. A survey of PRIMUS users in the Washington D.C. area, showed seven percent had previously used CHAMPUS and 78 percent had previously used the MTF [Ref. 1:p. 81]. The MTF in the area had a decline of 11.5 percent in visits, however, CHAMPUS experienced a 17 percent increase in outpatient claims [Ref. 1:p. 83].

An overview of the PRIMUS/NAVCARE contracts pertinent to this thesis is provided in Appendix A.

III. METHODOLOGY AND DATA COLLECTION

The data for this study spans the time period from Fiscal Year (FY) 1986 through the end of 1989, and was assimilated from a variety of sources. Due to the infancy of the program under study, civilian-run outpatient clinics (CROCs), and the recent vintage of the necessary data, the results of this analysis must be considered tentative. As an example, neither Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) nor CHAMPUS Reform Initiative (CRI) data were available for FY89, negating the possibility of direct comparison with Navy Cares (NAVCARE)/Primary Medical Care for Uniformed Services (PRIMUS) data.

The primary sources of data for this study are listed below, and will subsequently be described in detail:

1. Medical Expense and Performance Reporting System Reports (MEPRS) from Naval Hospital Oakland and Silas B. Hays, Fort Ord, for FY86-FY89, by quarter.

2. Workload and cost data for the NAVCARE/PRIMUS clinics under study, taken from the DD Form 250's (Material Inspection and Receiving Report). The data received is maintained bi-monthly.

3. CHAMPUS workload and cost data from the Office of CHAMPUS (OCHAMPUS) for FY86-FY88, by year.

4. Patient Exit Questionnaire developed by the authors, which is a one time study.

A. MEDICAL EXPENSE AND PERFORMANCE REPORTING SYSTEM (MEPRS)

The source of workload and expense data used in this thesis is a data collection and reporting system that has become standardized for all armed services. With only minor administrative differences, the MEPRS system is virtually the same for the Navy and Army military treatment facilities (MTFs) in this study. This section will provide a brief overview of the military expense system, emphasizing MEPRS. It will be followed by a description of the MEPRS data collected for this thesis.

1. MILITARY EXPENSE SYSTEM

The MTF maintains workload and cost data. The workload data includes admissions/dispositions, occupied bed days, average length of stay and average daily patient load, to name a few.

The MTF, as part of the Department of Defense (DOD), receives annual funding as new obligational authority. New obligational authority is the amount the MTF has to spend during the year. These funds must be utilized during the fiscal year, between 1 October to 30 September. Any funding not used is returned to the major claimant. Returning funds is often perceived as ineffective utilization of command resources, and may result in budget cuts in subsequent years. Thus, the incentive is to use the funds given during the fiscal year.

Costs are classified in three categories.

1. Commitments: The administrative reservation of funds, as when an activity sets aside funds to buy a piece of equipment.

2. Obligations: The legal reservation of funds. Obligations are incurred during the fiscal year. A contract has been signed by a Naval Contracting Officer obligating the government to buy a piece of equipment.

3. Expenditures: The actual payment of funds from the Treasury, for obligations incurred by the government. Expenses may be from the current fiscal year, or past fiscal years. The government has written a check to the contractor for the piece of equipment which the MTF has received.

Obligations and expenses are reported on a monthly basis to the major claimant. Obligation data is not maintained by the Command for military salary, as it is centrally managed. It does appear as an expense on the monthly report. The authors considered using obligation data for their thesis. However, determining the cost per service/procedure was not feasible, as the expenses could not be directly tied to admissions or visits.

2. COST ACCOUNTING FOR MEPRS

The cost accounting system for the MTF is known as MEPRS. The purpose of MEPRS is to provide consistent and uniform reporting of expense, manpower and workload by fixed DOD medical and dental treatment facilities on a quarterly basis. [Ref. 17:p. 3] MEPRS allows the military to compare their expenses among the services and to compare the MTF with the civilian sector.

A main component of MEPRS is the Uniform Chart of Accounts (UCA). UCA provides a uniform and single tri-service resource management and reporting system which encompasses common definitions for required performance, cost elements, and manpower utilization supporting the health care system. MEPRS is the primary report of the UCA process. UCA has the following characteristics:

1. Uniform Accounting Principles
2. Standard Terminology
3. Uniform Work Performance Indicators
4. Common Classification of Expenses by Work Center
5. Common Statistical Definitions
6. Common Cost Assignment Methodology [Ref. 18:p. 11]

MEPRS is a stepdown process of cost accounting. All expenses are broken down into four operating expense accounts: inpatient care, ambulatory care, dental care, and special programs. These operating accounts are the final expense accumulation points.

There are six functional categories: inpatient care, ambulatory care, dental care, ancillary services, support services and special programs. Appendix B provides a brief description of each category. These functional categories are intermediate operating expense accounts which are further assigned to the expense accounts. The support services are stepped down into the other five categories, and ancillary services are stepped down into the remaining

four categories. Support services and ancillary services accounts are stepped down to distribute their expenses to accounts that use their services.

Within each functional category there are summary accounts. It is the second level of accounts that encompass general areas of care. An example of summary accounts under inpatient care are: medical care, surgical care, obstetrical and gynecological care, pediatric care, orthopedic care and psychiatric care.

A subaccount is the smallest level of activity for which costs are accumulated. Looking at the functional account of inpatient care, there is the summary account of pediatric care. The subaccounts for pediatric care are: pediatrics, nursery, neonatal intensive care, and pediatric care (not elsewhere classified.

An example of the expense accounts is provided in Table 3-1.

TABLE 3-1 The MEPRS Expense Account Structure

A. Inpatient Care

AA. Medical Care

AAA. Internal Medicine
AAB. Cardiology
AAC. Coronary Care
AAD. Dermatology
AAE. Endocrinology
AAF. Gastroenterology
AAG. Hematology
AAH. Intensive Care (Medical)
AAI. Nephrology
AAJ. Neurology
AAK. Oncology
AAL. Pulmonary/Upper Respiratory Disease
AAM. Rheumatology
AAZ. Medical Care Not Elsewhere Classified

AB. Surgical Care
AC. Obstetrical and Gynecological Care
AD. Pediatric Care
AE. Orthopedic Care
AF. Psychiatric Care

B. Ambulatory Care
C. Dental Care
D. Ancillary Services
E. Support Services
F. Special Programs

3. ASSIGNMENT OF EXPENSES UNDER MEPRS

The types of expenses are: personnel; contractual services, base support, supplies and other goods and services; depreciation. Direct operating expenses are supplies and indirect operating expenses are depreciation and building maintenance. The expenses are assigned to the subaccounts. The subaccounts are rolled into the summary accounts, such as the nursery subaccount being rolled into

the pediatric summary account. The summary account is then rolled into the functional account, such as the pediatric summary account, being rolled into the inpatient care functional account.

Some expenses are assigned to more than one work center. One example is a physician, such as a pediatrician, who works inpatient and ambulatory (outpatient) care. The physician's expenses will be assigned to more than one work center. Within UCA the work center must meet four criteria.

1. Its function must be assigned by a higher medical authority.
2. Manpower is assigned.
3. Physical space is assigned and utilized.
4. Workload is generated.

Assignment of manpower and expenses allows manpower, expense and workload data to be complied into meaningful management reports.

There are five steps in the assignment of manpower and expenses. They are:

1. Manpower data collection and processing.
2. Assignment of expenses and workload recording.
3. Pre-stepdown purification of expenses.
4. Assignment of intermediate operating expense accounts and indirect cost pools.
5. Post-stepdown purification of final operating expense accounts.

Step one is manpower data collection and processing. It looks at the manpower procedures. There are two substeps performed. The first substep is the determination of a full time equivalent (FTE). The FTE is an amount of labor available to an MTF work center that would be available if one person had worked for one month in that work center. The FTE has five categories: clinician; direct care professional; direct care para-professional; registered nurse; administrative, clerical and logistic personnel. If a work center has multiple accounts, then the FTE must be divided among the accounts. For example, if a hospital ward that has 20 beds, where 10 beds are for medical care and 10 beds are for surgical care, 50 percent of the man-hours are assigned to medical care and 50 percent are assigned to surgical care.

The second substep is the determination of salary expenses. Civilian salaries are based on funds obligated for the month. The civilian salary includes the base salary, incentive and hazard pay, Government contribution to benefits, overtime, termination payments, etc. Military salaries are based on the DOD Annual Composite Standard Rates Table for the person's grade (Enlisted-01 through Officer-09) and the military department for the month. Appendix C provides an example of the DOD Annual Composite Standard Rates Table. The military salary does not take into account any variance between the table and actual

expenses. Variances may occur as some personnel receive bonuses, such as an orthopedic physician receiving a bonus for his specialty.

Step two is the assignment of expenses and workload factors. There are three parts to this step. The first part involves assigning nonpersonnel Operations and Maintenance Appropriation expenses to intermediate and final operating expense accounts.

The second part involves depreciation, for modernization and replacement of investment equipment funded by Other Procurement Appropriation. Investment equipment as defined by Other Procurement Appropriation has a value of $15,000 or more. However, the glossary for MEPRS identifies investment equipment as an asset over $1,000 with an estimated useful life over two years. [Ref. 19:p. A-15] Items not considered investment equipment are items for new and expanded facilities, real property installed equipment (ex. elevators) or War Readiness Material. Investment equipment is depreciated on a straight line basis using an eight year moving average based on the acquisition cost with zero salvage value. [Ref. 19:pp. 3-8] Within the MTF there is a defined distribution for depreciation between inpatient care and ambulatory care, as shown in Table 3-2. [Ref. 19:pp. 2E-8]

TABLE 3-2 Average Daily Patient Load Distribution

Average Daily Patient Load (ADPL)	Distribution Percentage Inpatient	Ambulatory
Greater than 250 ADPL	60	40
Between 50 - 250 ADPL	50	50
Less than 50 ADPL	40	60
Clinics		100

The distribution percentage provides uniformity throughout Department of Defense facilities. However, the distribution may not be accurate. An example is the Naval Hospital Oakland, which had an ADPL between 172 to 191 in 1988. Based on the table, the percentage distribution is 50 percent to inpatient care and 50 percent to ambulatory care. However, inpatient care accounts for 30 percent of their workload and ambulatory care accounts for 70 percent of their workload.

The third part is compilation of performance data. The performance data is used in the assignment of intermediate operating expense accounts and indirect cost pools and purification of expenses in some operating accounts.

Step three is the pre-stepdown purification of expenses to Support Services and Ancillary Services provided there is no overhead. If overhead is involved, the transfer will be made in step four. A good example of this is the supplies/parts used by the Biomedical Equipment Repair to fix equipment in the hospital. The supply/part is initially

charged to the Biomedical Equipment Repair, and the supervisor must break down the cost to the appropriate operating expense account.

Step four is the assignment of intermediate operating expense accounts and indirect cost pools. The expense assignment distributes the expenses of the intermediate operating expense account in order to obtain direct patient care expenses by subspecialty and for special programs. The stepdown method allow aggregate expenses in intermediate operating expense accounts to be assigned to those other intermediate operating expense accounts and to the final operating expense account which utilizes its service. Once the expenses of the intermediate account are assigned, the account is closed.

Indirect cost pools include mixed wards or clinics, which has a pseudofinal operating expense accounts. Expenses are assigned to them from the support service and ancillary service account, which excludes depreciation. The accumulated expenses shall be assigned based on a ratio of workload generated by each receiving account for the total workload of the indirect cost pool.

Step five is the post-stepdown purification of final operating expense accounts. Expenses charged to an account are prorated to another account based on the performance factor or other unit of service. Upon completion of step

five at the end of the quarter, the MEPRS report will be generated.

4. CHOICE OF MEPRS DATA

The authors chose to use MEPRS as it provides a consistent, uniform reporting of expenses, manpower and workload. A second reason it was chosen is its use by all services. This thesis involves both the Army and the Navy, thus it was necessary to have a uniform reporting system. MEPRS provides costs broken down by functional accounts, which gives a broad overview of costs for inpatient and outpatient. In addition, the costs are broken down by summary accounts, allowing the authors to focus on a given type of health care such as health care provided in the Primary Care Clinic. MEPRS provides the best information available concerning cost for the MTF. The authors could have chosen to use obligation data. However, determining the cost per service/procedure was not feasible as the expenses could not be directly tied to inpatient or outpatient care.

There are drawbacks to the MEPRS data. They are:

1. MEPRS uses expense data, which consists of current and past fiscal years. The data utilized is not a true reflection of this fiscal year's operating costs.

2. Military salaries do not include all expenses incurred. Thus, there is a question as to the true reflection of labor cost in the MTF. In addition, if the military salary of the physician is compared to the civilian practice, there would be inequities.

The military physician receives less salary than a civilian physician.

3. Depreciation of investment equipment is not defined clearly. If the definition of investment equipment is equipment funded by Other Procurement Appropriation, it must be noted that the value has changed since MEPRS was established. Today's investment equipment as defined by Other Procurement Appropriation has a value of $15,000 or more. However, the glossary for MEPRS identifies investment equipment as an asset over $1,000 with an estimated useful life over two years.

Future plans for MEPRS includes monthly/demand processing, personnel tracking, "what-if" analysis and inclusion of budgetary information as a few of its planned improvements. These improvements will make the MEPRS report a more viable tool for the MTF.

5. MEPRS Data

The MEPRS feedback that the MTF receives is a huge stack of data which, in addition to the actual MEPRS report, includes all input and stepdown data. The data is accumulated in quarterly and year-to-date sections for inpatient care, ambulatory care, dental, ancillary services, support services and special programs. For the purposes of this analysis, we decided that only the final accounts of inpatient and ambulatory care from Sections 1 and 2 of the Part I Medical Expense Report were pertinent to the thesis. Appendix D provides a sample of this report from Naval Hospital, Oakland. The main thrust of this research is an analysis of the cost effectiveness of the CROCs, so it is

necessary to examine MTF data that is comparable to NAVCARE/PRIMUS data. Since the principal mission of the CROCs is to provide primary care outpatient services, it would not be appropriate to compare CROC data with all outpatient visits of the MTFs. Such data would include outpatient visits for specialty clinics, outpatient surgery, oral surgery, and so on. These types of visits are clearly not within the scope of services offered by the CROCs, and were excluded. Accordingly, only data from MEPRS category "BHA" (Primary Care Clinics) were used for direct comparison with the CROCs. From that category, total expenses and total visits were utilized.

Another goal of this research is to consider whether the number of admissions and inpatient costs have been affected by the existence of the CROCs. In this case, the total of all "A" accounts were examined under section 1 (Inpatient Services) of the MEPRS Medical Expense Report. Total expenses and total dispositions were extracted.

A problem peculiar to the Oakland catchment area is the existence of a "Clinics Command." From FY87-FY89, the military clinics in the Oakland area were grouped into a separate command, and maintained separate MEPRS records. Since the military clinics are essentially engaged in the business of primary care outpatient visits, it was important to include their workload and costs in our study.

Another anomaly in the Oakland MEPRS system is the exclusion of the NAVCARE data from the report. Since NAVCARE is a centrally managed, civilian contracted organization, its workload and costs are divorced from the MTF. Its workload is not considered to be a component of the MTF. On the other hand, the Army philosophy is different than the Navy with regard to PRIMUS. PRIMUS workload and expenses are included in their MEPRS system; funding and management of the PRIMUS program is handled at the local level.

C. COST AND WORKLOAD DATA FOR NAVCARE/PRIMUS

The cost and workload data for the CROCs was probably the most straight-forward and the easiest to obtain. In both the NAVCARE and PRIMUS systems, the contractors' work is certified for payment bi-weekly. The Material Inspection and Receiving Report (DD Form 250) is prepared by the Contracting Officer's Technical Representative (COTR), listing the number of each type medical visit provided by the contractor during that two week period. The visit quantities are multiplied by the appropriate contract prices (based on volume, see Appendix A, Tables A-1, A-2, and A-3), and the document is submitted for payment.

D. PATIENT EXIT QUESTIONNAIRES

A Patient Exit Questionnaire was developed and distributed to all facilities under study. Two hundred questionnaires were delivered to each PRIMUS, NAVCARE, and MTF clinic for a total of 1000. A total of 353 questionnaires were completed and returned for use in the study. The objectives of the questionnaires were as follows:

1. Determine the primary users of the CROCs.
2. Determine patients' reasons for using the CROCs.
3. Determine frequency of use, MTF versus CROC.
4. Determine distance patients travel to the facilities.
5. Determine patient satisfaction with NAVCARE/PRIMUS.
6. Determine extent of CHAMPUS use among respondents.

The questionnaires were coded and analyzed with the SPSS/PC+ software package, utilizing the FREQUENCIES and CROSSTABS commands to obtain a basic breakdown and initial analysis of the data. Appendix E illustrates the design and coding scheme for the questionnaire. Appendix F is the output of the SPSS FREQUENCIES command and crosstabs results, providing the initial data breakdown.

E. CHAMPUS DATA

The need for CHAMPUS data was two-fold. First, to gauge the impact of NAVCARE and PRIMUS on the CHAMPUS workload, and second, to compare the relative costs of the program to the other health care alternatives. In order to succeed in a proper evaluation of CROC impact on CHAMPUS, it was essential to use FY89 data, as the CROCs did not exist prior to fourth quarter, FY88. Additionally, a new player entered the health care picture in FY89: The CHAMPUS Reform Initiative (CRI), with its CHAMPUS Prime and CHAMPUS Extra programs. As will be discussed later, peculiarities with the CRI billing system prevented us from obtaining FY89 CHAMPUS data.

CHAMPUS workload and cost statistics for FY86-FY89 were requested from the Office of Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS) in Aurora, Colorado, with the following criteria:

1. Patient population for each catchment area, by military service and beneficiary category (active duty dependent, retirees, etc.).

2. Number of CHAMPUS-sponsored hospital admissions by beneficiary category, and major type of care (medical, surgical, etc.), and associated costs.

4. Number of CHAMPUS-sponsored outpatient visits by beneficiary category, and major type of care (medical, surgery, etc.), and associated costs.

CHAMPUS statistics are currently compiled based on the 5-digit beneficiary residence zip code. The catchment area for each MTF includes all zip codes within an approximate 40

mile radius. The data are produced in both "duplicated" and "unduplicated" format. This distinction is pertinent only when the catchment areas of two or more MTFs overlap. Beneficiaries residing in the overlapping areas could potentially be double counted, causing "duplicated" data for more than one catchment area. Silas B. Hays Hospital at Fort Ord is the sole MTF in the Monterey area, so the point is moot. However, the catchment area of Naval Hospital Oakland overlaps with MTFs for the Army, at the Presidio, San Francisco and Travis Air Force Base. Consequently, unduplicated data were used in this analysis. In order to "unduplicate" the data, OCHAMPUS uses the "10-mile band rule." Under this system, a beneficiary's data for care received is assigned to the closest inpatient MTF's catchment area, unless an MTF affiliated with the sponsor's branch of service is not more than ten miles farther than the nearest MTF. [Ref. 20:p. 2]

The CHAMPUS statistics were promptly received from the statistics branch at OCHAMPUS, but only for FY86-FY88. Apparently, data availability lags approximately 12-15 months beyond the end of the fiscal year. Merely by chance, the authors discovered that the Defense Manpower Data Center (DMDC), based in Monterey, also maintained CHAMPUS data, and had FY89 data available. Unfortunately, the data provided by DMDC was unrealistically low and unusable due to a coding anomaly in use for the CRI programs. The catchment area zip

code coding system was virtually eliminated by the end of the fiscal year, making it impossible to determine the costs or workloads for specific catchment areas.

Fiscal year 1989 cost and workload data for the CRI programs were also requested in writing, and in numerous follow-up telephone calls, but it was never received. A representative for the contractor, Foundation Health Corporation, stated that the request was pending approval by their lawyers and the Department of Defense.

To summarize, CHAMPUS data was unattainable for FY89, and direct comparisons between CROC data and CHAMPUS data for determination of CROC impact were not possible. Projections based on available CHAMPUS data were used for the models described in the next chapter.

IV. DATA ANALYSIS

This chapter focuses on the analysis of the data described in Chapter III, and describes the model and methods of analysis used. We begin with an initial analysis of the raw data, followed a "what-if" spreadsheet model.

A. INITIAL ANALYSIS OF RAW DATA

1. Data Utilized

The raw data was obtained from a variety of resources listed in Chapter III, Methodology and Data. The initial analysis was accomplished by looking at the raw data and making initial observations, comparisons and assumptions. The raw data for both Oakland and Silas B. Hays catchment areas is provided in Appendix G.

2. Silas B. Hays Army Community Hospital Catchment Area

The following observations are made concerning the data for the Silas B. Hays Army Community Hospital (SBHACH) in the Monterey Bay area.

1. The catchment area population has decreased 9.2 percent since fiscal year (FY) 1986. The most notable decrease is the 8.4 percent decrease between FY88 and FY89. Since FY86, the active duty population and the dependents of active duty have decreased the most, 11.9 percent and 11.7 percent respectively. Retirees and dependents of retirees have decreased .2 percent and 4.1 percent respectively.

2. The CHAMPUS inpatient cost per patient is more than double the MTF inpatient cost. From FY86-FY88, the CHAMPUS cost increased 13.3 percent compared to a 3.7 percent increase in the military treatment facility (MTF). It is noted that in FY87, both the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) and the MTF experienced a sharp rise in inpatient cost, 26.0 percent and 6.3 percent respectively.

3. CHAMPUS cost per outpatient visit has remained relatively stable since FY86, experiencing a 1.5 percent increase. CHAMPUS cost per medical visit increased 3.5 percent during the same time period.

4. The MTF cost per outpatient visit between FY86-FY89 third quarter increased 18.8 percent. The primary care clinic for the same time period has increased 43.4 percent. The largest increases take place from FY86-FY87 (29.0 percent) and from FY88-FY89 (14.5 percent).

5. The Primary Care for the Uniformed Services (PRIMUS) cost per visit has generally decreased. However, between the second and third quarter of FY89 there was an increase of 3.2 percent. Two factors are noted in the PRIMUS data. First, start-up costs were included in the first quarter PRIMUS was operating (fourth quarter FY88). Second, the first quarter of operation in the fiscal year will be the highest until enough beneficiaries are seen, whereby the cost per visit is lowered per the contract, reducing the overall costs.

6. The number of visits to PRIMUS has increased over three quarters for FY89, by 12.3 percent.

7. From FY86-FY88, the number of CHAMPUS outpatient visits have increased 38.6 percent and medical visits have increased 42.5 percent. It is noted that from FY87-FY88 the increase was 1.0 percent for total outpatient visits and .6 percent for medical visits.

8. The MTF has increased the total outpatient visits by .7 percent from FY86-FY88.

However, the primary care clinic visits have decreased by .3 percent. The primary decrease occurred between FY86-FY87, .5 percent.

9. Inpatient admissions increased 13.5 percent for the MTF and 9.0 percent for CHAMPUS from FY 86 - 88. Between FY86-FY87 the MTF experienced a decrease of 4.1 percent, where CHAMPUS had an increase of 67.7 percent. However, between FY87 and FY88, the MTF had an increase of 18.4 percent and CHAMPUS had a decrease of 34.5 percent.

In summary, the catchment area population has decreased most notably for active duty and dependents of active duty. The number of admissions has increased for the MTF and CHAMPUS, however, at a greater rate than for the MTF. The number of outpatient visits for the MTF/CHAMPUS/PRIMUS has generally increased. The greatest increase is seen in CHAMPUS, then PRIMUS and finally the MTF. The cost per patient has increased both for the MTF and CHAMPUS, but has decreased for PRIMUS. The decrease for PRIMUS is attributed to the nature of the contract. The inpatient cost for CHAMPUS is double that of the MTF, and the outpatient CHAMPUS cost are approximately 26 percent more than the MTF.

The above facts give credence to the hypothesis that CROCs should:

1. Increase services to the beneficiaries, as demonstrated by the increase in outpatient visits.

2. Increase inpatient admissions for the MTF and decrease CHAMPUS admissions.

3. Provide a cost saving alternative to the MTF, whereby resources can be devoted to inpatient care, which should reduce inpatient CHAMPUS cost. Outpatient services are available at an alternative source, PRIMUS, which is lower than CHAMPUS costs, again providing cost savings for the military health care system.

3. Oakland Catchment Area

MEPRS data collection in the Oakland catchment area was a bit complicated, as the cognizance of the facilities changed hands during the period of study. In FY 86, the reports contained data for both NAVHOSP Oakland and the San Francisco Clinics Command. In FY87 and FY88, the Clinics Command maintained separate files. In FY 89, the Naval Hospital resumed cognizance over the Clinics Command, and began to collect their statistics once more. Since the clinics provide the majority of the outpatient medical services throughout the Oakland catchment area, it is crucial to include the data in our study.

Notwithstanding the above, the following observations can be made of the raw data:

1. The catchment area population has decreased by 6.3 percent since FY87.

2. The CHAMPUS cost per admission is consistently more than double that of the MTF, and the MTF cost per admission has risen by 9.4 percent since FY86.

3. CHAMPUS cost per outpatient medical visit remained relatively stable from FY86 to FY88, with a decrease of about 0.11 percent.

4. MTF cost per primary cost per visit increased by 39 percent from FY86 to FY88, but fell just below the FY86 level in FY89.

5. The Navy Cares (NAVCARE) cost per visit steadily decreased throughout its 15 month existence to a point where it is currently lower than both CHAMPUS and MTF outpatient visits.

6. The number of NAVCARE Full Visits steadily increased during its first six months of existence, peaking in January, 1989. It then sustained a 17.7 percent decrease over the last eight months of the fiscal year. Conversely, the number of NAVCARE Limited Visits increased by 101 percent over the same eight month period. The total number of NAVCARE visits increased by 38.5 percent between the beginning and end of FY89.

7. In FY89, MTF inpatient visits decreased by 5.0 percent and inpatient costs decreased by 8.1 percent; primary care outpatient visits increased by 3.0 percent, but costs decreased by 27.3 percent

To summarize, cost per patient has increased in the MTF and CHAMPUS, but has decreased at NAVCARE. The overall beneficiary population has decreased, but the number of outpatient visits has increased slightly at the MTF and substantially at NAVCARE (CHAMPUS unavailable). The number of admissions and inpatient costs have decreased at the MTF. As illustrated in Table 4-1, even though the number of primary care outpatient visits has increased since opening the NAVCARE clinic, the total costs have decreased.

TABLE 4-1 NAVHOSP Oakland Cost and Visit Summary

	MTF		NAVCARE		TOTALS	
	Visits	Costs	Visits	Costs	Visits	Costs
FY87	140,394	11,145,846	0	484,130	140,394	11,145,846
FY88	127,813	11,391,962	4,797	484,130	127,813	11,876,092
FY89	131,682	8,278,737	43,351	2,540,499	175,033	10,819,236

These facts tend to support the hypothesis that the existence of a CROC should:

1. Increase the availability of services to beneficiaries (demonstrated by an increase in the total primary care visits).

2. Alleviate congestion at the MTF (demonstrated by a decrease in the number of MTF visits since FY87).

3. Provide a cost-saving alternative to the MTF (demonstrated by the decrease in total primary care costs since opening the NAVCARE clinic).

B. "WHAT-IF" SPREADSHEET MODEL

A spreadsheet model was designed to evaluate the cost effectiveness of CROCs. The model was was developed using Lotus 1-2-3 to provide "what-if' answers with regard to the options which are most cost effective. Various combinations of potential increases or decreases in certain input variables were used in the model, such as numbers of visits and admissions at the potential health care sources. The basic model and its related formulas are provided in Appendix H.

This model by no means attempts to capture all costs in the various health care systems. The thesis purpose is to examine cost effectiveness and impact of CROCs, which are essentially primary care clinics. Thus, we chose to limit our outpatient data to similar type visits from the MTFs and CHAMPUS. Specifically, MEPRS account "BHA" (Primary Care Clinics) for military facilities and Medical Outpatient Services for CHAMPUS (which excludes delivery, psychiatric

and surgical care) were utilized. All inpatient visits (admissions) were included in the model, regardless of type of service.

The model consists of a number of preset formulas and input variables, as follows:

Projected Changes:

```
#1  Population (Oakland):       % incr or decr in outyrs (90-92)
#2  Population (Fort Ord):      % incr or decr in outyrs (90-92)
#3  NAVCARE Visits:             % incr or decr in outyrs (90-92)
#4  PRIMUS (Presidio) Visits:   % incr or decr in outyrs (90-92)
#5  PRIMUS (Salinas) Visits     % incr or decr in outyrs (90-92)
#6  NAVHOSP Visits:             % incr or decr in outyrs (90-92)
#7  NAVHOSP Outpatient Costs:   % incr or decr in outyrs (90-92)
#8  SBHACH Visits:              % incr or decr in outyrs (90-92)
#9  SBHACH Outpatient Costs:    % incr or decr in outyrs (90-92)
#10 CHAMPUS Visits (Oakland):   % incr or decr in outyrs (89-92)
#11 CHAMPUS Outpt Costs (Oak): % incr or decr in outyrs (89-92)
#12 CHAMPUS Visits (Fort Ord): % incr or decr in outyrs (89-92)
#13 CHAMPUS Outpt Costs (Ord): % incr or decr in outyrs (89-92)
#14 NAVHOSP Admission Costs:    % incr or decr in outyrs (90-92)
#15 SBHACH Admission Costs:     % incr or decr in outyrs (90-92)
#16 CHAMPUS Adm Costs (Oak):    % incr or decr in outyrs (89-92)
#17 CHAMPUS Adm Costs (Ord):    % incr or decr in outyrs (89-92)
#18 With/without NAVCARE (1/0) 1 = NAVCARE exists, 0 = doesn't
#19 With/without PRIMUS  (1/0) 1 = PRIMUS  exists, 0 = doesn't
```

In general, actual costs and visits are used for FY86-FY89, and projections based on historic data are used for FY90-FY92, with the following exceptions:

1. CHAMPUS data for FY89 was unavailable, so it was projected.

2. NAVCARE and PRIMUS clinics in this study did not exist prior to FY88, so the data is absent from the model.

3. Certain datapoints for fourth quarter, FY89 were unavailable, so they were projected (SBHACH costs, admissions and outpatient visits).

4. NAVCARE and PRIMUS costs for FY90-FY92 are fixed by contract, based on volume.

1. Primary Model Construction

a. NAVCARE and PRIMUS

NAVCARE and PRIMUS each consist of multiple pricing schedules based on volume and option year of the contract. In order to project future costs, the percentage of types of visits in FY89 was calculated, then applied to all out-years. If total visits for the year multiplied by the percent for a visit type exceeds the quantity threshold, the volume cost is applied to the excess portion, otherwise, the initial cost is used, as illustrated in the below examples and Table 4-2:

TABLE 4-2 Abbreviated Version of Table Used in Model

NAVCARE - Type Visit	fy89-fy92 % of total	fy89-fy92 threshold*	fy89 initial cost	fy89 volume cost
Full	75.30%	25500	74.05	47.01
Limited	8.85%	8500	11.61	0
Rx Refills	11.16%	6000	0.61	0.59
Immunizations	1.08%	1000	5.08	0.17
Mammogram	3.54%	3000	81.61	39.40
Emergency	0.07%	25	194.86	188.26

* threshold is set by the contract

Example (to calculate Full Visits):

For 30,000 total visits, multiply 30,000 by 75.30% = 22,590. Since 22,590 is less than the threshold of 25,500, the calculated quantity (22,590) is multiplied by the FY89 Initial Cost of $74.05 for a Full Visit cost of $1,672,789.50:

30,000 (total visits)	22,590 (full visits)
X .753 (% of total)	X 74.05 (initial unit cost)
22,590 (full visits)	$1,672,789.50 (total cost)

For 50,000 total visits, multiply 50,000 by 75.30% = 37,650. Since 37,650 is greater than the threshold of 25,500, the difference between the calculated quantity (37,650) and the threshold (25,500), is multiplied by the FY89 Volume Cost of $47.01, which is then added to the threshold amount multiplied by the FY89 Initial Cost.

Calculation #1		Calculation #2	
50,000	(total visits)	37,650	(full visits)
X .753	(% of total)	- 25,500	(threshold)
37,650	(full visits	12,150	(excess visits)

Calculation #3		Calculation #4	
12,150	(excess visits)	25,500	(threshold)
X 47.01	(unit volume cost)	X 74.05	(unit initial cost)
$571,171.50	(volume cost)	$1,888,275.00	(total initial cost)

Calculation #5

571,171.50	(volume cost)
+ 1,888,275.00	(total initial cost)
$2,459,446.50	(total cost)

The above procedure is continued for each type of visit and each option year. The final cost per visit is calculated after removal of any deduction for contractual noncompliance and after addition of site preparation amortization.

PRIMUS clinics are handled similarly, but with different visit types and pricing schedules.

b. NAVHOSP Oakland, SBHACH and CHAMPUS

The number of MTF outpatient visits in this model depends on the selection of input variables #18 [With/without NAVCARE (1/0)], and #19 [With/without PRIMUS (1/0)]. If a "0" is selected, the model assumes the NAVCARE or PRIMUS clinic does not exist, and the NAVCARE/PRIMUS visits are distributed to the appropriate MTF and CHAMPUS

totals, based on questionnaire results (percent of CROC users who still use CHAMPUS). This allows calculation of costs in a world without CROCs to contrast health care costs in different scenarios. For example, the formula for determining outpatient visits for NAVHOSP Oakland is as follows:

```
@if($NAVCAREEXIST=1,N$6,(N$6+(C$5*(1-$P$10))))
```

Which equates to: If NAVCARE exists ($NAVCAREEXIST=1), use actual NAVHOSP outpatient visit figures (N$6), otherwise multiply the number of NAVCARE visits (C$5) by the percentage of NAVCARE patients who claim to not use CHAMPUS (1-$P$10), and add the product to NAVHOSP outpatient visit figure (N$6).

The formula for determining outpatient costs is similar, as follows:

```
@if($NAVCAREEXIST=1,N$7,(N$7/N$6)*C$40)
```

This is essentially the same as the previous formula, except that the result is multiplied by the hospital cost per visit to obtain total costs for outpatient visits.

Similar formulas were used to determine outpatient visits and costs for SBHACH and CHAMPUS.

The final report of the Military Health Care Study [Ref. 7:p. 1055] suggests that a direct relationship exists between outpatient visits and number of admissions. Extending this to the model, projections for out-year admissions were calculated as a percentage of FY89 outpatient visits. In addition, input variables #18 and #19 were once again utilized. If a "1" is selected, the model

assumes that the CROC exists and the results are obtained utilizing CROC workload. If a "0" is selected, the model assumes nonexistence of the CROC and calculates admissions based on NAVHOSP Oakland (or SBHACH) visits alone. A typical formula performing this function is described below:

```
@if($H$102=1,($Q$24/($F$40+$F$6))*(G$42+G$6),($Q$24/$F$40)*G$40)
```

Which equates to: If NAVCARE exists ($H$102=1), divide FY89 NAVHOSP admissions ($Q$24) by the combined total of FY89 NAVHOSP visits ($F$40) and FY89 NAVCARE visits ($F$6), then multiply the quotient by the combined total of current year NAVHOSP visits (G$42) and current year NAVCARE visits (G$6); otherwise divide FY89 NAVHOSP admissions ($Q$24) by FY89 NAVHOSP visits ($F$40), then multiply the quotient by current year NAVHOSP visits (G$40).

Similar formulas were used to determine out-year inpatient visits for SBHACH and CHAMPUS. Inpatient costs in the out-years are determined by multiplying current year admissions by prior year cost per admission. This is then multiplied by the cost input variable for NAVHOSP, SBHACH or CHAMPUS, as appropriate.

2. Model Variation

The model described in the above paragraph provides an unbiased baseline for study. It allows comparisons of data with pre-determined increases or decreases of the various input variables. This enables one to view the reactions of the model to discrete input variables, with all factors being equal. Of course, in the real world, things are not so cut and dried, and various unknown factors may

cause unexpected outcomes. In order to provide a realistic feel to the model, it was slightly modified to take advantage of forecasted data vice pre-determined input variables. Historical quarterly data from FY86-FY88 (pre-CROC years) were analyzed by the "Storm" (version 2.0) software package. A combination of trend and level analysis was utilized to obtain forecasts of the following data:

Level	Trend
NAVHOSP Outpatient Visits	NAVHOSP Inpatient Costs
NAVHOSP Outpatient Costs	SBHACH Inpatient Costs
NAVHOSP Admissions	PRIMUS Presidio Visits
SBHACH Outpatient Visits	PRIMUS Salinas Visits
SBHACH Outpatient Costs	
SBHACH Admissions	
NAVCARE Visits	

The forecasted data were "hard-wired" into the formulas of the base model, and all input variables were disabled except for variables #18 and #19. The revised model and its formulas are illustrated in Appendix I.

3. Results

a. Baseline Model Results

The model was run with a variety of input conditions to simulate various cost and workload scenarios. In order to speculate whether or not the CROCs are accomplishing a cost-saving function, a set of "switches" was built into the model which removes either PRIMUS or NAVCARE (or both), and distributes the workload between the MTFs and CHAMPUS. These switches toggle between the four

basic conditions (No CROCs, both CROCS, NAVCARE only, or PRIMUS only), under the simulated cost and workload conditions. Thus, it is possible to demonstrate the impact of CROCs on a health care system with no growth, with cost increases only, with cost and workload growth, with negative growth, or any combination thereof.

As a baseline, all input variables mentioned earlier in this chapter were set to zero, and the CROCs were assumed to be nonexistent. This portrayed a system with no growth in outpatient visits, admissions, or costs.

All costs per visit in the SBHACH area are less than in Oakland, so predictably, the existence of PRIMUS has the most pronounced effect on total costs. This is due to the fact that the cost per visit at NAVCARE ($58.60) is less than Naval Hospital Oakland ($62.87). Additionally, the combined cost per visit of the PRIMUS clinics ($47.34) is less than NAVCARE ($58.60), so PRIMUS' existence results in a 2.48 percent decrease in total costs for FY90, whereas the existence of NAVCARE results in only a 1.74 percent decrease for the same time period. Each scenario produced variations of the same theme, always with PRIMUS responsible for greater cost savings. As expected, the greatest savings occur with all CROCs in existence. What may not be immediately obvious is why costs decrease with PRIMUS existence, since SBHACH cost per visit is less than both PRIMUS clinics. The explanation is simple. PRIMUS

existence will result in fewer CHAMPUS visits and consequently fewer CHAMPUS admissions. Since CHAMPUS cost per visit and cost per admission are both higher than PRIMUS and SBHACH, any shift in source of care from CHAMPUS to PRIMUS will result in overall lower costs. A similar, but less dramatic effect will occur with NAVCARE existence, since NAVCARE cost per visit is lower than both NAVHOSP Oakland and CHAMPUS. The model was run in the following scenarios:

1. All input variables set to zero
2. All cost input variables set for a 5% annual increase
3. All cost input variables set for a 5% annual increase, and a 1% increase in CROC visits.
4. All cost input variables set for a 5% annual increase, and a 1% increase in non-CROC visits.
5. All cost input variables set for a 5% annual increase, and a 1% decrease in CROC visits.
6. All cost input variables set for a 5% annual increase, and a 1% decrease in non-CROC visits.
7. All cost input variables set for a 5% annual decrease, and a 1% increase in CROC visits.
8. All cost input variables set for a 5% annual decrease, and a 1% increase in non-CROC visits.

In all cases, the simultaneous existence of all CROCs resulted in the greatest cost savings, with the largest contribution made by PRIMUS. A complete set of results for each described scenario is provided in Appendix H.

Our intention is not to suggest that costs were less in all scenarios, only that within a particular scenario, costs were reduced due to CROC existence. Obviously, if all cost input variables are set for an annual 5 percent increase, total costs will be higher than if those variables were set for a 0 percent increase.

It may be helpful to examine the data in a slightly altered format, as shown in Table 4-3. This table shows the effect that changing the input cost and workload variables has on total costs, as opposed to specifically looking at the effect of whether or not the CROCs exist.

As Table 4-3 clearly demonstrates, the percent of cost increase for the various input variable conditions is less when both CROCs are assumed to exist, in all cases. The table suggests that of the two CROCs, PRIMUS exerts the most influence on controlling costs, although the smallest percent increase occurs when both are included in the model. The only exception seems to be when cost decreases are input into the model. Total costs are still less in this case, but there is a higher percent decrease in total costs without the CROCs. This is due to the fact that CROC prices are set by contract and don't change, even while all others are decreasing in response to the input variables.

TABLE 4-3 What-if Model Output

FY 90	All Input Variables Set to 0	All Cost Input Variables Set for a 5% Annual Increase	% Change	All Cost Input Variables Set For 5% Annual Increase and a 1% Increase in CROC Visits	% Change	All Cost Input Variables Set For 5% Annual Increase & a 1% Increase in Non-CROC Visits	% Change	CROC Visits and MTF Costs, Visits & Admissions Based on Forecasts	% Change
No CROCS	96404044	102226271	6.04%	102518936	6.34%	103107870	6.95%	151122549	56.76%
With NAVCARE Only	94728891	100233662	5.81%	100512522	6.11%	100967273	6.59%	130472029	37.73%
With PRIMUS Only	94011996	99306328	5.63%	99560721	5.90%	100086372	6.46%	128088160	36.25%
With Both CROCS	92336843	97313718	5.39%	97554306	5.65%	97945775	6.07%	108256603	17.24%
FY 91									
No CROCS	96404044	107337585	11.34%	107955254	11.98%	109038598	13.11%	173646030	80.12%
With NAVCARE Only	94801336	105189373	10.96%	105777198	11.58%	106648653	12.50%	145854416	53.85%
With PRIMUS Only	94143601	104175055	10.66%	104676368	11.19%	105710914	12.29%	143054437	51.95%
With Both CROCS	92540893	102026843	10.25%	102498312	10.76%	103320969	11.65%	116097477	25.46%
FY 92									
No CROCS	96404044	112704464	16.91%	113682165	17.92%	115312770	19.61%	197761963	105.14%
With NAVCARE Only	94876076	110391542	16.35%	111320908	17.33%	112654458	18.74%	162190872	70.95%
With PRIMUS Only	94530604	109536037	15.87%	110320249	16.70%	111908869	18.38%	159182146	68.39%
With Both CROCS	93002636	107223115	15.29%	107958992	16.08%	109250557	17.47%	124461399	33.83%

FY 90	All Input Variables Set to 0	All Cost Input Variables Set For a 5% Annual Increase and a 1% Decrease in CROC Visits	% Change	All Cost Input Variables Set For a 5% Annual Increase and a 1% Decrease in Non-CROC Visits	% Change	All Cost Input Variables Set For a 5% Annual Decrease and a 1% Increase in CROC Visits	% Change	All Cost Input Variables Set For a 5% Annual Decrease and a 1% Increase in Non-CROC Visit	% Change
No CROCS	96404044	101933607	5.74%	101347683	5.13%	90936875	-5.67%	91448818	-5.14%
With NAVCARE Only	94728891	99954802	5.52%	99501729	5.04%	89560245	-5.46%	89958732	-5.04%
With PRIMUS Only	94011996	99051935	5.36%	98528366	4.80%	89026890	-5.30%	89483662	-4.82%
With Both CROCS	92336843	97073130	5.13%	96682412	4.71%	87650259	-5.08%	87993576	-4.70%
FY 91									
No CROCS	96404044	106726062	10.71%	105658214	9.60%	86639144	-10.13%	87498495	-9.24%
With NAVCARE Only	94801336	104607396	10.34%	103747243	9.44%	85526493	-9.78%	86218651	-9.05%
With PRIMUS Only	94143601	103678417	10.13%	102657742	9.04%	85132792	-9.57%	85947362	-8.71%
With Both CROCS	92540893	101559751	9.75%	100746770	8.87%	84020141	-9.21%	84667518	-8.51%
FY 92									
No CROCS	96404044	111746123	15.91%	110154377	14.26%	82546211	-14.37%	83720492	-13.16%
With NAVCARE Only	94876076	109480578	15.39%	108177098	14.02%	81693540	-13.89%	82648933	-12.89%
With PRIMUS Only	94530604	108766700	15.06%	107214737	13.42%	81702351	-13.57%	82826443	-12.38%
With Both CROCS	93002636	106501154	14.51%	105237458	13.16%	80849681	-13.07%	81754884	-12.09%

b. Model Variation Results

The model variation using forecasted data provided similar but more dramatic results than the basic model. In this scenario, the CROCs' existence lowered the costs per visit, total outpatient costs, and total costs for all outyears. In this case, the existence of the PRIMUS clinics had a less pronounced effect on costs than did NAVCARE. For FY92, NAVCARE caused an 8.21 percent decrease in total outpatient costs as opposed to 0.39 percent for PRIMUS. As would be expected by the above figures, the existence of both NAVCARE and PRIMUS produced the biggest decreases in total outpatient costs (8.59 percent in FY92). Likewise, the existence of both CROCs caused an impressive 37.07 percent decrease in total costs in FY92. To illustrate, the data for this model displays the same reaction as the basic model in Table 4-3: that the combination of both CROCs exert the most significant influence on costs. The remainder of the output produced by this model is provided in Appendix I.

V. ANALYSIS OF PATIENT EXIT QUESTIONNAIRE

The patient exit questionnaire was designed to obtain an understanding of patient demographics, health care usage patterns and satisfaction with the Navy Cares (NAVCARE)/Primary Medical Care for Uniformed Services (PRIMUS) services. Of the 353 respondents 55.2 percent were Navy; 26.1 percent were Army; 18.7 percent were other. This chapter provides an analysis of the raw data, and the interpretation of the findings.

A. ANALYSIS OF RESPONSE DATA

Appendix F contains the raw data (frequency distribution) from the patient exit questionnaire. The data frequencies were expanded in some cases using crosstabulations to clearly depict specific categories. A brief description of the data and analysis follows.

The patient status of the respondents follows the same pattern as the nationwide beneficiary population discussed in Chapter II. The majority of the respondents were retirees and dependents of retirees (41.7 percent), followed by dependents of active duty (37.1 percent) and finally active duty (19.5 percent).

Of the questionnaires returned, 23.8 percent were completed at the Naval Hospital (NAVHOSP) Oakland; 46.5

percent at NAVCARE; 19.8 percent at PRIMUS; 9.9 percent at Silas B. Hays Army Community Hospital (SBHACH) Fort Ord.

Table 5-1 compares where the respondents are receiving their care and how often they use the military treatment facility (MTF). Of the respondents, 14.1 percent of NAVCARE respondents and 16.1 percent of PRIMUS respondents do not use the MTF.

Table 5-1 Crosstabulation Location by Frequency of MTF Use

FREQMTF→ / LOCATION	Count / Row Pct / Col Pct	More than once per month	Once per month	2-3 times per year	Less than once per year	Do not use MTF outpt services	Row Total
NAVHOSP Oakland		10	15	35	18		78
		12.8	19.2	44.9	23.1		24.1
		38.5	26.3	22.6	32.7		
NAVCARE		7	23	74	24	21	149
		4.7	15.4	49.7	16.1	14.1	46.0
		26.9	40.4	47.7	43.6	67.7	
PRIMUS		3	10	29	10	10	62
		4.8	16.1	46.8	16.1	16.1	19.1
		11.5	17.5	18.7	18.2	32.3	
Silas B. Hays		6	9	17	3		35
		17.1	25.7	48.6	8.6		10.8
		23.1	15.8	11.0	5.5		
Column Total		26	57	155	55	31	324
		8.0	17.6	47.8	17.0	9.6	100.0

Variable Descriptions:

LOCATION 3. Where are you receiving care today?
By FREQMTF 5a. How often do you use MTF outpt services?

On the other hand, Table 5-2 illustrates that 64.2 percent of NAVHOSP respondents and 40.6 percent of SBHACH respondents do not use the CROCs.

Table 5-2 Crosstabulation Location by Frequency of CROC Use

FREQNAV→ / LOCATION	Count / Row Pct / Col Pct	More than once per month	Once per month	2-3 times per year	Less than once per year	Do not use NAVCARE/PRIMUS	Row Total
NAVHOSP Oakland		3	2	7	17	52	81
		3.7	2.5	8.6	21.0	64.2	25.0
		10.7	3.6	5.5	35.4	80.0	
NAVCARE		14	26	88	20		148
		9.5	17.6	59.5	13.5		45.7
		50.0	47.3	68.8	41.7		
PRIMUS		11	22	24	6		63
		17.5	34.9	38.1	9.5		19.4
		39.3	40.0	18.8	12.5		
Silas B. Hays			5	9	5	13	32
			15.6	28.1	15.6	40.6	9.9
			9.1	7.0	10.4	20.0	
Column Total		28	55	128	48	65	324
		8.6	17.0	39.5	14.8	20.1	100.0

Variable Descriptions:

LOCATION 3. Where are you receiving care today?
By FREQNAV 5b. How often do you use NAVCARE/PRIMUS?

As seen on Question #4a of Appendix F, the most frequent reason given for selecting a particular facility was that it was the closest source of health care (31.9 percent). This was followed by less waiting time (25.0 percent) and care availability (21.0 percent). Appointment availability, better service, referred from other source, and better hours

of operation were all less than 10 percent each.

Most respondents used the health care facilities (MTF and CROCs) 2-3 times per year. Table 5-3 and Table 5-4 compare the patient status with how often the MTF and the CROCs are used respectively. As can be seen from Table 5-3, the majority of dependents of active duty (55.6 percent) utilize the MTF 2-3 times per year. This figure is lower than that found by the research discussed in Chapter II, which reported dependents of active duty utilizing the MTF seven times per year.

Table 5-3 Crosstabulation Patient Status by Frequency of MTF Use

FREQMTF→ / STATUS	Count / Row Pct / Col Pct	More than once per month	Once per month	2-3 times per year	Less than once per year	Do not use MTF outpt services	Row Total
ACDU		5	8	23	14	11	61
		8.2	13.1	37.7	23.0	18.0	18.8
		19.2	14.0	14.8	25.5	35.5	
DEP ACDU		7	17	69	18	11	122
		5.7	13.9	56.6	14.8	9.0	37.7
		26.9	29.8	44.5	32.7	35.5	
retired		12	18	37	12	4	83
		14.5	21.7	44.6	14.5	4.8	25.6
		46.2	31.6	23.9	21.8	12.9	
DEP retired		2	12	25	10	5	54
		3.7	22.2	46.3	18.5	9.3	16.7
		7.7	21.1	16.1	18.2	16.1	
Other status			2	1	1		4
			50.0	25.0	25.0		1.2
			3.5	.6	1.8		
	Column Total	26	57	155	55	31	324
		8.0	17.6	47.8	17.0	9.6	100.0

Variable Descriptions:

STATUS 2. Patient Status
By FREQMTF 5a. How often do you use MTF outpatient services?

In Table 5-4, again, the majority of dependent of active duty (49.2 percent) utilized the CROCs 2-3 times per year. If one considers the CROCs as sources of care in the civilian sector, this figure is lower than that described by the research cited in Chapter II, which reported dependents of active duty utilizing the health care facility 5 times per year.

Table 5-4 Crosstabulation Patient Status by Frequency of CROC Use

FREQNAV→ / STATUS	Count / Row Pct / Col Pct	More than once per month	Once per month	2-3 times per year	Less than once per year	Do not use NAVCARE/PRIMUS	Row Total
ACDU		9	9	15	12	22	67
		13.4	13.4	22.4	17.9	32.8	20.7
		32.1	16.4	11.7	25.0	33.8	
DEP ACDU		12	23	59	14	12	120
		10.0	19.2	49.2	11.7	10.0	37.0
		42.9	41.8	46.1	29.2	18.5	
retired		3	14	31	16	20	84
		3.6	16.7	36.9	19.0	23.8	25.9
		10.7	25.5	24.2	33.3	30.8	
DEP retired		4	9	22	6	7	48
		8.3	18.8	45.8	12.5	14.6	14.8
		14.3	16.4	17.2	12.5	10.8	
Other status				1		4	5
				20.0		80.0	1.5
				.8		6.2	
	Column Total	28	55	128	48	65	324
		8.6	17.0	39.5	14.8	20.1	100.0

Variable Descriptions:

STATUS 2. Patient Status
By FREQNAV 5b. How often do you use NAVCARE/PRIMUS?

Patient satisfaction with NAVCARE/PRIMUS was determined using responses of "very satisfied," "moderately satisfied," and "unsatisfied." Excluded were "not applicable" and "no answers" responses. The crosstab results are presented in Table 5-5. An overwhelming number of respondents (95.6 percent) were at least moderately satisfied with the care provided at NAVCARE/PRIMUS. Sixty eight percent were very satisfied with the care received, while only 4.4 percent were unsatisfied with the care received. Respondents who were at least moderately satisfied with the care from CROCs are as follows: 92 percent of the respondents at NAVHOSP; 97.19 percent at NAVCARE; 98.39 percent at PRIMUS; 80.95 percent at SBHACH. Chi-square analysis provided another means to examine patient satisfaction with CROCs. As illustrated in Table 5-5, the results indicate a significant difference between the sources of care. The respondents from SBHACH seem to show a lower degree of satisfaction than those in other facilities. There is no significant difference in the degree of satisfaction among the other three, as demonstrated by the chi-square test in Table 5-6.

Table 5-5 Crosstabulation Satisfaction by Location

LOCATION→ / SATISFAC	Count / Row Pct / Col Pct	NAVHOSP Oakland	NAVCARE	PRIMUS	Silas B. Hays	Row Total
Very Satisfied		18	96	45	11	170
		10.5	56.5	26.5	6.5	68.0
		72.0	67.6	72.6	52.4	
Moderately Satisfied		5	42	16	6	69
		7.2	60.9	23.2	8.7	27.6
		20.0	29.6	25.8	28.6	
Unsatisfied		2	4	1	4	11
		18.1	36.4	9.1	36.4	4.4
		8.0	2.8	1.6	19.0	
	Column Total	25	142	62	21	250
		10.0	56.8	24.8	8.4	100.0

Chi-Square	D. F.	Significance	Critical Value at 5% Significance
14.690	6	.0228	12.592

Variable Descriptions:

SATISFAC 6. Are you satisfied with services available at NAVCARE/PRIMUS?

By LOCATION 3. Where are you receiving care today?

Table 5-6 Crosstabulation Satisfaction by Location

LOCATION→ / CHMPPRES	Count / Row Pct / Col Pct	NAVHOSP Oakland	NAVCARE	PRIMUS	Row Total
Very Satisfied		18 11.3 72.0	96 60.4 67.6	45 28.3 72.6	159 69.4
Moderately Satisfied		5 7.9 20.0	42 66.7 29.6	16 25.4 25.8	63 27.5
Unsatisfied		2 28.6 8.0	4 57.1 2.8	1 14.3 1.6	7 3.1
	Column Total	25 10.9	142 62.0	62 27.1	250 100.0

Chi-Square	D. F.	Significance	Critical Value at 5% Significance
3.427	4	.4890	9.488

Variable Descriptions:

SATISFAC 6. Are you satisfied with services available at NAVCARE/PRIMUS?

By LOCATION 3. Where are you receiving care today?

The majority of the respondents felt the MTF and the CROCs offered the services they required. A minority of the respondents felt the MTF (12.1 percent) and CROCs (8.8 percent) did not offer the services they required. In 60.6 percent of the responses, the services offered were a determining factor for the source of health care.

The majority of the respondents at the MTF (36.1 percent) and the CROCs (44.8 percent) traveled less than 10 miles to receive health care. This reinforces the findings in the above paragraph, where a majority of the respondents chose the closest health care facility. The data suggests that the majority of the respondents (90.3 percent) live within the 40-mile radius catchment area established by CHAMPUS. In addition, 91.6 percent of the respondents live within 40 miles of the CROCs.

Table 5-7 compares the health care facilities with the /distance traveled to the MTF. As can be seen, the respondents who normally traveled less than 10 miles to the MTF are as follows: 18.1 percent of NAVHOSP respondents; 30.7 percent of NAVCARE respondents; 62.9 percent of PRIMUS respondents; 54.3 percent of SBHACH respondents.

Table 5-7 Crosstabulation Location by Distance to MTF

Count / DISTMTF→ Row Pct / Col Pct / LOCATION	Less than 10 miles	11-20 miles	21-30 miles	31-40 miles	41-50 miles	More than 50 miles	Row Total
NAVHOSP Oakland	15	26	15	10	5	12	83
	18.1	31.3	18.1	12.0	6.0	14.5	25.2
	12.6	24.5	34.1	34.5	27.8	85.7	
NAVCARE	46	53	21	17	12	1	150
	30.7	35.3	14.0	11.3	8.0	.7	45.5
	38.7	50.0	47.7	58.6	66.7	7.1	
PRIMUS	39	18	2	2		1	62
	62.9	29.0	3.2	3.2		1.6	18.8
	32.8	17.0	4.5	6.9		7.1	
Silas B. Hays	19	9	6		1		35
	54.3	25.7	17.1		2.9		10.6
	16.0	8.5	13.6		5.6		
Column Total	119	106	44	29	18	14	330
	36.1	32.1	13.3	8.8	5.5	4.2	100

Variable Descriptions:

LOCATION 3. Where are you receiving care today?
By DISTMTF 8a. Distance that you normally travel to the MTF

Table 5-8 compares the health care facility with the distance traveled to the CROCs. As can be seen, the respondents who normally traveled less than 10 miles to the CROCs are as follows: 33.3 percent of NAVHOSP respondents; 36.1 percent of NAVCARE respondents; 68.2 percent of PRIMUS respondents; 62.5 percent of SBHACH respondents.

Of the respondents, 45.1 percent stated the location had an effect on their decision on source of health care, while 54.9 percent stated the distance had no effect on their source of health care.

Table 5-8 Crosstabulation Location by Distance to CROC

DISTNAV-> / LOCATION	Count / Row Pct / Col Pct	Less than 10 miles	11-20 miles	21-30 miles	31-40 miles	41-50 miles	More than 50 miles	Row Total
NAVHOSP Oakland		18	11	11	4	2	8	54
		33.3	20.4	20.4	7.4	3.7	14.8	18.1
		13.4	15.7	25.0	15.4	16.7	61.5	
NAVCARE		56	38	27	20	10	4	155
		36.1	24.5	17.4	12.9	6.5	2.6	51.8
		41.8	54.3	61.4	76.9	83.3	30.8	
PRIMUS		45	16	4	1			66
		68.2	24.2	6.1	1.5			22.1
		33.6	22.9	9.1	3.8			
Silas B. Hays		15	5	2	1		1	24
		62.5	20.8	8.3	4.2		4.2	8.0
		11.2	7.1	4.5	3.8		7.7	
Column Total		134	70	44	26	12	13	299
		44.8	23.4	14.7	8.7	4.0	4.3	100

Variable Descriptions:

LOCATION 3. Where are you receiving care today?
By DISTNAV 8b. Distance you normally travel to NAVCARE/PRIMUS?

The authors had heard appointment availability was a source of dissatisfaction by beneficiaries using the MTF. This area was addressed in the patient exit questionnaire in questions 9a and 9b. However, the validity of the responses is questionable, as MTF respondents may not have been responding to care at the Primary Care Clinic, but to all appointment availability, i.e. Internal Medicine, Cardiology, etc. In addition, CROCs are primarily geared for walk-in care vice appointments, though limited appointments are offered.

Since CHAMPUS data for fiscal year (FY) 1989 was unavailable, the patient exit questionnaires provided us our only tool for speculating the impact of CROCs on CHAMPUS. A majority of the respondents (57.3 percent) have used CHAMPUS. Of the 57.3 percent who have used CHAMPUS, 55.1 percent still use CHAMPUS. Table 5-9 shows the comparison of respondents who have previously used CHAMPUS as their source of care. Of the respondents from NAVHOSP, 48.1 percent had previously used CHAMPUS; NAVCARE had 59.2 percent; PRIMUS had 63.1 percent; SBHACH had 58.8 percent. Chi-square analysis was used to determine if a significant difference existed between the source of care (NAVHOSP/NAVCARE/PRIMUS/SBHACH) and previous CHAMPUS use. A significant chi-square figure would indicate that CHAMPUS users are being attracted to one source of care over another.

Table 5-9 Crosstabulation Previous CHAMPUS Use by Location

LOCATION→ / CHMPPREV	Count / Row Pct / Col Pct	NAVHOSP Oakland	NAVCARE	PRIMUS	Silas B. Hays	Row Total
Yes		39	93	41	20	193
		20.2	48.2	21.2	10.4	57.3
		48.1	59.2	63.1	58.8	
No		42	64	24	14	144
		29.2	44.4	16.7	9.7	42.7
		51.9	40.8	36.9	41.2	
	Column Total	81	157	65	34	337
		24.0	46.6	19.3	10.1	100.0

Chi-Square	D. F.	Significance	Critical Value at 5% Significance
3.93126	3	.2690	7.815

Variable Descriptions:

CHMPPREV 10a. Have you or family used CHAMPUS before?
By LOCATION 3. Where are you receiving care today?

As Table 5-9 illustrates, the chi-square value of 3.93126 indicates that no significant difference exists between sources of care with regard to previous CHAMPUS usage. Therefore, it appears that no one source of care is more successful than the others in attracting CHAMPUS users.

Table 5-10 takes the comparison a step further. Of those respondents who have previously used CHAMPUS, it compares those who continue to use CHAMPUS with their source of care. Of the NAVHOSP respondents, 63.9 percent continue to use CHAMPUS. Of the NAVCARE respondents, 58.1 percent

continue to use CHAMPUS. For PRIMUS, 50.0 percent continue to use CHAMPUS. For SBHACH, 35.0 percent of the respondents continued to use CHAMPUS. The chi-square results demonstrate that no significant difference exists between sources of care and current CHAMPUS usage, indicating that no one source of care stands out as the most successful in reducing CHAMPUS use.

Table 5-10 Crosstabulation Present CHAMPUS Use by Location

LOCATION→ / CHMPPRES	Count / Row Pct / Col Pct	NAVHOSP Oakland	NAVCARE	PRIMUS	Silas B. Hays	Row Total
Yes		23	54	18	7	102
		22.5	52.9	17.6	6.9	55.1
		63.9	58.1	50.0	35.0	
No		13	39	18	13	83
		15.7	47.0	21.7	15.7	44.9
		36.1	41.9	50.0	65.0	
	Column Total	36	93	36	20	185
		19.5	50.3	19.5	10.8	100.0

Chi-Square	D. F.	Significance	Critical Value at 5% Significance
5.09957	3	.1646	7.815

Variable Descriptions:

CHMPPRES 10b. Do you or your family still use CHAMPUS?
By LOCATION 3. Where are you receiving care today?

The most frequent reason given for continued use of CHAMPUS was to obtain services unavailable in the MTF (36.8 percent) followed by excessive waiting time (12.0 percent),

other sources too far (10.4 percent), and better care (10.4 percent). The other reasons (inpatient care, shortage of appointments, emergencies only, and other) were all less than 10 percent.

B. INTERPRETATION OF SURVEY FINDINGS

While the status of the respondents may follow the national trend for military health care, their usage of the health care facility was lower.

Overall, respondents were satisfied with the care received at the CROCs. The authors feel that this is due to the perception that the respondents feel they receive better service at the CROCs. In their written comments many felt they were treated with care and compassion, as a person, not just a number. Some of the respondents felt the personnel at the MTF were rude and uninterested in their welfare.

A majority of the respondents had ready access to the MTF or CROCS, precluding the use of CHAMPUS if the beneficiary is able and willing to use the military health care system. The beneficiary determines usage of the MTF/CROC/CHAMPUS for outpatient care, while the MTF determines the usage of CHAMPUS for inpatient care. If the beneficiaries are satisfied with the care received at the CROC, it is assumed that this would relieve the congestion for outpatient care of the MTF and bring in CHAMPUS

outpatient beneficiaries. This would help reduce CHAMPUS costs.

By relieving the outpatient congestion at the MTF, the commanding officer could devote more resources to inpatient care. Providing more inpatient care reduces the non-availability forms certificates from the MTF, thus inpatient CHAMPUS admissions should decrease. Since CHAMPUS cost per admission is approximately twice that of the MTF, any shift in workload from CHAMPUS should result in cost savings.

VI. SUMMARY AND RECOMMENDATIONS

Are Civilian-Run Outpatient Clinics (CROCs) cost effective? The question has been evaluated by the authors on two planes: from a strictly financial point of view, and from the perspective of the military beneficiary. There are many factors which impact the cost effectiveness of military health care, such as the number of personnel actually billeted and on board at a military treatment facility (MTF), contracting for physicians and nurses to work in the MTFs, etc.

Prior to undertaking this project, the authors had been exposed to comments and reports suggesting that CROCs were not cost effective health care alternatives, even when compared to CHAMPUS. This presented an intriguing challenge, since CHAMPUS has long been regarded as cost ineffective when compared to in-house medical care.

The first step in making a fair comparison was to ensure that similar data were used in any comparisons. All available cost and workload data were not deemed pertinent to this study. Since CROCs are essentially primary care clinics, we restricted comparisons to "Primary Care Clinic" coded visits from the Medical Expense and Performance Reporting System (MEPRS) report (MEPRS code "BHA"), and to CHAMPUS "Medical" visits. Additionally, we made the

assumption that the number of inpatient visits would vary in response to the number of outpatient visits, so inpatient visits were included in the study as well. Consequently, when we talk about "total costs," we refer only to primary care visit costs plus inpatient costs, not all conceivable health care costs.

The second aspect of the thesis is subjective and qualitative, but nonetheless crucial to the study. If patients are unsatisfied with services, to the point of nonutilization of the facility, lower cost per visit is irrelevant. In order to be cost effective, the clinics must succeed in attracting patients away from higher cost alternatives. However, failing to reduce visits at CHAMPUS or MTFs would not necessarily brand CROCs a failure. If successful in their mission of increasing health care availability, they may attract new patients who would previously foregone care due to distance, cost, appointment availability, etc.

When viewed on a strictly financial basis, CROCs indeed appear to be cost effective. In our analysis, the CROCs appear to provide a cost saving alternative for the military health care system. Health care costs will continue to increase. However, with the CROCs, the rate of increase is lower than without them. In evaluating the CROCs with our model, both NAVCARE and PRIMUS appear to be quite successful in reducing costs. PRIMUS in all cases had a greater impact

on cost control, but the effect of PRIMUS and NAVCARE together was additive. Not only do they provide a lower cost per visit, but their existence may be a significant factor in reducing CHAMPUS usage. While the CROCs seem to have caused an overall increase in primary care visits, the number of MTF primary care visits have decreased. This can potentially have the effect of increasing availability of MTF inpatient care at the expense of the CHAMPUS program.

Additionally, the CROCs have increased the availability of care for eligible beneficiaries. CROCs are accessable 365 days a year, and negate the need to rely on the MTF emergency room or the extremely congested MTF clinics.

It is difficult to determine if the CROCs have created a higher demand for health care services. Statistics are not kept as to the number of people who are not able to access the MTF. However, the overall increase in total outpatient visits since introduction of the CROCs indicate that demand has indeed increased.

Upon evaluation of patient questionnaires, we must conclude that patient satisfaction is high for the majority of respondents. Most patients are satisfied with services offered, location of clinics, and quality of care. The primary users of the CROCs are dependents of active duty, retirees, active duty, and finally dependents of retirees. If the retirees and dependents of retirees were combined, the order would be dependents of active duty, retirees and

dependents of retirees and active duty. This is similar to the results obtained in the literature which was researched. Whether or not the CROCs succeed in attracting patients from CHAMPUS cannot be concluded based on the questionnaire results. There was no significant difference between the various sources of care (NAVCARE, NAVHOSP, PRIMUS, SBHACH) with regard to current CHAMPUS usage.

It is the opinion of the authors that CROCs are successful on all levels reviewed in this study. However, this was unfortunately not an all-encompassing study. The thesis would have had more significance if CHAMPUS data had been available for FY89. An evaluation would have been made determining if CHAMPUS usage and cost had decreased for both inpatient and outpatient. For the military health care system to decrease costs, lowering CHAMPUS inpatient admissions is imperative. The MTF must recognize that the CROCs can supplement the outpatient care services, whereby the MTF devote their resources to inpatient services. However, the actual occurrence of this is ultimately the decision of the MTF commanding officer.

Future studies would be enhanced by investigating a wider spectrum of civilian-run outpatient clinics throughout the military health care system. Several CROCs nationwide have been in operation since FY87, and one since FY86. Analysis of those clinics would have the advantage of at least 3 years of cost and workload data, and at least 2

years of CHAMPUS data. By the end of FY90, the CROCs studied in this thesis will have been in existence for at least two years, with presumedly stabilized data. By that time, there should be at least one year of CHAMPUS data available to gauge the impact of the CROCs. In California, the CHAMPUS Reform Initiative will assuredly have an impact on health care costs, and will be crucial to any additional analysis of the CROCs.

APPENDIX A

DESCRIPTION OF THE CIVILIAN-RUN OUTPATIENT CLINIC CONTRACTS

Contract language is by nature very descriptive and absolute, therefore, minimal changes to the basic wording were attempted for this overview. This appendix is comprised primarily of excerpts and paraphrased excerpts from the contracts.

A. NAVY CARES (NAVCARE) CLINIC, OAKLAND, CALIFORNIA [Ref. 21]

1. Overview

NAVCARE clinics are civilian contracted ambulatory care facilities offering family practice/primary care services to eligible beneficiaries. The NAVCARE mission is characterized by:

1. Provision of walk-in acute and chronic care emphasizing continuity of care, wellness, health risk reduction and preventive medicine.
2. Provision of consultations to the appropriate Naval hospital, as required.
3. Provision of patient education and monitor patient compliance.
4. Recognition of emotional and behavioral illness and initiate appropriate referrals.

NAVCARE Oakland is located in downtown Oakland, California, approximately ten miles from Naval Hospital

(NAVHOSP) Oakland. The current contractor is PHP Healthcare Corporation of Alexandria, Virginia. All eligible beneficiaries are welcome at the clinic, although it is not geared toward treatment of active duty personnel. They are most likely to receive care at the military clinics at the local Naval bases. In fact, active duty personnel accounted for only 9.5 percent of all visits this fiscal year to date. Active duty dependents comprise the majority with 45.9 percent of all visits.

Under the terms of the contract, PHP is required to perform the following services:

1. Episodic and continuing family practice services.
2. Laboratory services.
3. Radiology and mammography services
4. Pharmacy services.
5. Routine birth control counseling and prescriptions.
6. Health records maintenance, technical reports as required, and other health care administration.
7. Maintenance of a comprehensive Quality Control Program.

2. Hours of Operation

The NAVCARE clinic is open 365 days per year. The minimum hours of operation are 0700 to 2000 Monday through Friday, and 0700-1600 on Saturdays, Sundays, and holidays. Care must be provided for all patients presenting at any time during the minimum hours of operation stated above.

3. Accessioning Eligible Patients

The contractor is required to register each patient and verify eligibility. Care of ineligible patients is normally not reimbursable. A daily log of patient visits is provided to the Contracting Officer's Technical Representative (COTR).

Care is normally provided on a walk-in basis, but appointments are authorized in the contract when determined to be in the best interests of health care demand management, and with the prior approval of the COTR.

Each walk-in patient must be triaged within ten minutes after initial patient screen. Adequate staff must be maintained to ensure a maximum turnaround time of two hours from initial screen to completion of the patient visit. Patients with appointments must be seen within 30 minutes of their appointment time.

For routine care beyond the scope of the NAVCARE clinic, patients will be referred to NAVHOSP Oakland. Patients requiring emergency care shall be referred to the nearest facility capable of providing the required treatment.

4. NAVCARE Personnel

a. Project Manager

The Project Manager is the contractor's full-time on-site manager responsible for supervision and

training of employees, resolution of patient complaints, compliance with contract, and liaison between the contractor and the contracting officer/COTR. Either the Project Manager or his alternate must be present 40 hours per week, and must be available within 30 minutes during all hours of clinic operation. The Project Manager must have a bachelors degree in a health care or business related field, and must have 5 years experience in a health care related profession.

b. Medical Director

The Medical Director is responsible for providing clinical professional oversight and direction of medical services. He shall be board certified in family practice, internal medicine, pediatrics, ob/gyn, or emergency medicine, and shall have at least 5 years combined experience in clinical medical practice and medical staff administration. He must be licensed to practice medicine in the state of California, and must maintain Advanced Cardiac Life Support (ACLS) Certification.

c. Charge Nurse

The Charge Nurse serves as the contractor's nursing manager, and supervises and trains nursing and staff employees. The charge nurse shall have: a bachelor's degree

in nursing plus 5 years experience, or; an associate's degree plus 7 years experience, or; a diploma certificate plus 9 years experience. The charge nurse must be licensed in the state of California and must maintain Basic Life Support (BCLS) Certification.

d. NAVCARE Physicians

The contractor shall provide the proper number and mix of specialties, including: family practice, internal medicine, pediatrics, ob/gyn, and emergency medicine. All physicians must have graduated from an American residency program in one of the above specialties and be approved by the Medical Education and Hospitals of the American Medical Association. All physicians must obtain an unrestricted license for the state of California and a Drug Enforcement Agency (DEA) registration. All physicians must maintain ACLS certification.

e. Nursing Personnel

Registered nurses and licensed practical nurses must maintain California licensure and BCLS certification at all times while performing services under the contract.

f. Physician Assistants

Physician assistants must possess a bachelors degree with the primary academic concentration as a physician assistant. They must be certified by the National

Commission on Certification of Physician Assistants, and have a minimum of one year's experience as a provider in a related area of primary care/family practice. Physician assistants must maintain California state licensure and BCLS certification.

g. Other Personnel

Pharmacists must maintain a state licence and pharmacy, laboratory and radiology technicians must be certified or licensed by the state.

h. Contracting Officer's Technical Representative (COTR)

The COTR is the government employee responsible for assuring cntractor performance through audit, documentation, and liaison with the contracting officer. The COTR is appointed in writing by the contracting officer. The COTR has no authority to resolve disputes or obligate funds. As of this writing, the COTR for NAVCARE Oakland is a Navy chief warrant officer physician assistant.

5. Quality Assurance

a. General

The contractor is required to develop a comprehensive Quality Control Program which describes the contractor's methodologies, protocols, operating procedures, and standards of medical practice. Additionally, the

contractor must maintain a comprehensive Medical Quality Assurance Program which describes the contractor's ability to build an ongoing program consistent with current Joint Commission on Accreditation of Hospitals (JCAH) standards to objectively and systematically monitor and evaluate the quality and appropriateness of patient care, pursue opportunities to improve patient care, and resolve identified problems.

The contractor shall apply to JCAH in sufficient time to receive accreditation as an ambulatory care center within the first year of operation. As of this writing, the NAVCARE clinic has received such accreditation.

b. Radiological Services

All radiographs and radiographic services shall meet American College of Radiology and JCAH standards. A board-certified diagnostic radiologist shall be responsible for promotion of quality control, radiation protection measures, and film interpretation. All film interpretations except mammography shall be included in the patient's medical record within two weekdays. All patients shall be notified of mammography results within 5 days of the test, unless results indicate potential malignancy, in which case they shall be notified within 2 days.

c. Laboratory Service

Laboratory services shall meet the requirements of the College of American Pathologists (CAP) and the JCAH. All lab reports must be included in the patient's record within two days after the test was taken. All patients must be notified of Pap test results within 14 days of the test. If results indicate potential malignancy, the patients must be notified within two days of receipt of the test result. The Medical Director and/or attending health care provider shall be notified of all abnormal results.

d. Government Liability

The contractor expressly agrees to indemnify, save and hold harmless, and defend the United States and all of its employees and agents, acting officially or otherwise, from any and all liability, claims, demands, actions, debts, and attorney fees arising out of, claimed on account of, or in any manner predicated on loss or damage to the property of and injuries to, or death of any persons whatsoever, which may occur as a result of or in connection with the services being provided under this contract.

6. Payment of the Contract

Table A-1 reflects the cost per visit throughout the term of the contract and its option years. Unlike the Primary Care for the Uniformed Services (PRIMUS) contract,

the NAVCARE contractor is administered centrally by the Naval Regional Contracting Center in Philadelphia.

Through a combination of random sampling, customer complaints, and unscheduled inspections, the COTR evaluates contractor performance. The COTR completes a certificate of performance which itemizes the total visits and costs during the period (every two weeks), which is forwarded to Philadelphia for payment. If discrepancies in contractor performance are detected, the COTR calculates a recommended deduction from the amount payable, based on the number and type of defects. The contractor is then paid on a monthly basis the percentage of the monthly contract payment less deductions due to unsatisfactory performance.

Since the NAVCARE contract is funded and managed centrally, its workload and cost data are not reflected in the Medical Expense and Performance Reporting System (MEPRS) of NAVHOSP Oakland.

TABLE A-1 Cost per Service at NAVCARE, Oakland

Service	FY88*	FY89	FY90	FY91	FY92
Full Visit					
First 25,000 Visits	102.55	74.38	74.05	76.27	78.56
25,501-51,000 Visits	48.38	47.01	48.42	49.87	51.37
51,001-75,000 Visits	40.94	32.09	33.05	34.04	35.07
Limited Visit					
First 8,500 Visits	15.47	11.28	11.61	11.96	12.32
8,501-17,000 Visits	0.00	0.00	0.00	0.00	0.00
17,001-25,000 Visits	0.00	0.00	0.00	0.00	0.00
Prescription Refills					
First 6,000 Refills	0.57	0.59	0.61	0.63	0.65
6,001-60,000 Refills	0.57	0.59	0.61	0.63	0.65
Immunization Visits					
First 1,000 Visits	4.99	4.93	5.08	5.23	5.38
1,000-15,000 Visits	0.17	0.17	0.17	0.18	0.18
Mammography Visits					
First 3,000 Visits	93.42	79.24	81.61	84.06	86.58
3,001-6,000 Visits	42.45	39.40	40.59	41.80	43.06
6,001-9,000 Visits	25.89	26.67	27.47	28.30	29.14
Emergency Ambulance Service					
First 25 Transports	181.90	188.26	194.86	201.68	208.73
26-100 Transports	181.90	188.26	194.86	201.68	208.73
101375 Transports	181.90	188.26	194.86	201.68	208.73
Total Contract Costs if Max Quantities Are Realized	**2,040,344	4,510,722	4,581,012	4,718,850	4,861,128

*Contract maximum quantities for FY88 were 1/4 the amounts for the following years (contract in existence for only the 4th quarter).

**Amount includes $650,814 for site preparation/activation costs.

B. PRIMARY CARE FOR UNIFORMED SERVICES (PRIMUS), MONTEREY/SALINAS CALIFORNIA [Refs. 22 and 23]

1. Overview

PRIMUS provides family practice/primary care to beneficiaries in the armed services. In addition to the medical services, PRIMUS provides nursing, laboratory, radiology, pharmacy and immunization services in support of the family practice/primary care and health care administration programs. In the Monterey area, there are two PRIMUS clinics providing health care to the Fort Ord catchment area. One is located in Salinas, which is a contractor owned/contractor operated facility. The second is located at the Presidio of Monterey (POM), which is a government owned/ contractor operated facility.

The PRIMUS at Salinas provides health care primarily for non-active duty beneficiaries. During working hours active duty personnel will receive their health care at Silas B. Hays Hospital, Fort Ord. After working hours, active duty personnel may receive health care from PRIMUS at Salinas. The PRIMUS at POM provides health care for all beneficiaries. In addition, it provides sick call and optometry services for active duty at POM and the Naval Postgraduate School.

2. Hours of Operation

The PRIMUS operates 365 days per year. It is open from 0700 to 2000 hours Monday through Friday and from 0800 to 1500 hours Saturday, Sunday and federal holidays. Sick call at POM is from 0700 to 0930 hours and 1230 to 1330 hours Monday through Friday. Services are provided on a walk-in basis, however, both clinics do offer appointments.

3. Accessioning Eligible Patients

Patients seen at PRIMUS must be triaged and registered within ten minutes of their arrival. The contractor is required to conduct a DEERS (Defense Eligibility Enrollment Reporting System) eligibility check on 25 percent of the patients who request services. In addition, the contractor must ensure that the beneficiary has valid identification. From the time the patient is seen at the reception to completion of treatment and dispensing of medication, the time is not to exceed a maximum of two hours for at least 85 percent of the patients. When a patient is seen at PRIMUS, they will be evaluated and have their treatment approved by a physician. The exception is a short visit, which consists of medication renewals, blood pressure screens, skin test readings, simple medical advice, simple suture removal, or directed uncomplicated follow-up for an acute minor illness or injury.

The pharmacy services at PRIMUS provides drugs and biologicals as required for the medical visit. The PRIMUS at Salinas will only fill those prescriptions written by a PRIMUS provider. The PRIMUS at POM will fill those prescriptions written by PRIMUS providers and the military dental providers located in the same building as the PRIMUS clinic. CHAMPUS prescriptions are not filled. All prescriptions are to be provided within 30 minutes, except those specifically identified as being available within 24 hours. Such drugs are listed in the contractor's offer, and include those with short shelf life, high price, or low usage.

If routine treatment beyond the capabilities of PRIMUS is required, the patient shall be referred to Silas B. Hays Hspital. Patients requiring emergency treatment shall be transported to the nearest medical facility capable of providing proper medical attention. An emergency is defined as medical action required to prevent loss of life, limb, sight or as essential to prevent undue suffering. Transportation of patients in an emergency situation will be coordinated by PRIMUS, however, the expense will be the responsibility of the patient. The non-active duty patient may file with CHAMPUS, Medicare, or third party payers for reimbursement. Medical expenses incurred on behalf of active duty personnel will be paid by the United States (U. S.) Army.

4. PRIMUS Personnel

PRIMUS must ensure at least one physician and one registered nurse are present during all operating hours. All personnel are required to be conversant and fluent in English. The following personnel will be discussed: Medical Director, Project Manager, PRIMUS physician, professional nurse, physician assistants, pharmacists, radiological technologists, laboratory personnel and contracting officer's representative.

a. Project Manager

The Project Manager is responsible for ensuring competent and proper performance of all work at PRIMUS. He will resolve administrative issues such as complaints and immediate contractor personnel problems. The Project Manager is the central point of contact for the government, and will be responsive to the contracting officer regarding reports and records of treatment. The Medical Director may assume the duties of the Project Manager.

b. Medical Director

The Medical Director is responsible for overseeing the evaluation and outcome of all clinical and patient care activities and shall execute an ongoing documented quality assurance plan. The Medical Director or a designated physician will be at the clinic during

operating hours at all times. The Medical Director shall be American Board certified in one of the following specialties: family practice, internal medicine, emergency medicine, obstetrics/gynecology, or pediatrics.

c. PRIMUS Physicians

The PRIMUS physicians will be currently licensed to practice medicine in the state of California. If the person is an allopathic or osteopathic physician, he shall have completed residency training in a program accredited by the Accreditation Council for Graduate Medical Education or certified in a primary care specialty (family practice, obstetrics/ gynecology, internal medicine, emergency medicine or pediatrics). The radiologist and the internist or cardiologist reading the electrocardiograms shall be American board certified.

d. Professional Nurses

Professional nurses (registered nurses) must have an accredited bachelor's degree in nursing. Nurse practitioners must have an accredited master's degree in a primary care nurse practitioner field. The contract does not require the professional nurse to be licensed to practice nursing in the state of California. However, the contract states that the nursing service staff on site must meet patient care requirements within accepted professional standards, practices, policies, and procedures as

established by the Joint Commission Accreditation of Hospitals (JCAH), U. S. Army regulations and applicable state and local law/regulations.

e. Physician Assistants

Pysician assistants must have an accredited Bachelor's degree. The degree must have a primary academic concentration as a physician assistant.

f. Pharmacists

The pharmacist must have a current license and certification from the state licensing agency to practice their specialty.

g. Radiologist

The radiological technologists will be a graduate of a program in radiological technology approved by the Council on Medical Education of the American Medical Association or shall have the equivalent of such education and training; received training from a radiologist in radiographic exposure techniques for long bone, chest, spine, and skull films, and have appropriate current certification/registration, as applicable.

h. Laboratory Personnel

The laboratory personnel shall possess or meet current certification/registration with the College of American Pathologists (CAP).

i. Contracting Officer's Representative (COR)

The COR is the government's local point of contact for coordination with the contractor. This person acts in a liaison capacity to coordinate activities between the contractor and the government as required in the performance of work under the contract. This person shall ensure that the contractor maintains a complete quality control program. The COR will coordinate reporting communicable diseases and sexually transmitted diseases in accordance with state laws and existing U. S. Army regulations. The specific duties of the COR will be delineated in his appointment letter.

4. Quality Assurance

a. General

Quality assurance is the responsibility of the contractor. The government's quality assurance program is not a substitute for quality control by the contractor. Each phase of service provided by the contractor is subject to Government inspection during the contractor's operations and after completion of the tasks.

The health care services provided shall be of a quality to meet or exceed the standards as established by the AMA, JCAH, CAP, the Academy of Family Practice Physicians (AFPP), the American College of Radiology (ACR),

the American Pharmaceutical Association (APHA) and agencies of the U. S. Government. The contractor shall apply for and receive JCAH accreditation for the PRIMUS clinic, as an ambulatory care center, within the first year of operation.

The contractor quality control program should be submitted with the proposal of the contract. The quality program will cover all services in the contract, and must specify areas to be inspected on a scheduled and unscheduled basis. The quality control program will have a method to identify deficiencies in the quality of services performed and take corrective action before the level of performance becomes unsatisfactory. Employee training will include the following: safe cleaning operation, service requirements, reporting of accidents, conservation, security, safety, and other contract requirements. The quality control file will be maintained by the contractor through the terms of the contract. Upon the completion or termination of the contract, the quality control file will be the property of the Government.

b. Radiological Service

Due to the nature of radiological services, additional quality control factors are required. Retakes of radiographs shall be no higher that six percent. The contractor is required to maintain and calibrate the equipment, and maintain all documentation for maintenance

and calibration of equipment. The contractor is also responsible for maintaining radiation protection and film badge/personal dosimetry monitoring programs. Quality control measures, promotion of radiation protection measures and official film interpretation shall be accomplished by an American board eligible or board certified diagnostic radiologist. Film interpretations shall be included in the medical treatment record within 48 hours. The radiographs are considered the property of the Government.

c. Laboratory Service

The laboratory service, like radiological service, has additional quality control factors. The laboratory must meet the standards of JCAH Pathology, Medical Laboratory Services, and CAP. Laboratory services performed by PRIMUS will be operated in accordance with all CAP accreditation and inspection criteria. The laboratory tests will be completed, reported and filed in the medical treatment record within 48 hours with the exception of bacteriology cultures. If the PRIMUS clinic is not able to perform the laboratory tests, and must send the laboratory tests out, the laboratory to which the laboratory specimens are sent must by an accredited licensed medical laboratory.

6. Liability

The following clause covers the claims liability:

> "The contractor agrees to save the Government harmless of any and all claims, demands, actions, debts, liabilities, judgements, costs, and attorney's fees arising out of, claimed on account of, or in any manner predicated upon loss of, or damage to, property of or injuries to, or the death of any and all persons whatsoever, in any manner caused or contributed to by the contractor, his agents, servants, or employees, while going to or departing from the PRIMUS clinic, and to save the Government harmless from and on account of damage of any kind which the Government may suffer as a result of any act of the contractor, his agents, servants, or employees in an about the said PRIMUS clinic."

The contractor is responsible for providing medical malpractice insurance for contractor employees. The contractor shall maintain liability insurance in the amount of not less than $1,000,000 per incident during the term of the contract. The Government has no control over the professional aspects of the services rendered by the contractor, including the contractor's professional medical judgement, diagnosis or specific medical treatments.

TABLE A-2 Cost per Service for PRIMUS at Salinas

Service	FY88*	FY89	FY90	FY91	FY92
Clinic visit Estimated Amount 18,000	59.20	71.15	75.27	79.25	83.64
Clinic visit in excess of 24,000 Estimated Amount 18,000	30.06	34.74	36.61	38.56	40.61
Short visit Estimated Amount 3,000	17.88	18.86	19.90	20.99	22.14
Prescription Refills and Immunologicals not Given as a Clinic Visit Estimated Amount 29,376	8.92	9.37	9.85	10.35	10.88
Dispensing fee for Prescription Refills Estimated Amount 36,000	3.00	3.17	3.34	3.52	3.71
Administration fee for Immunizations Estimated Amount 4,000	3.85	4.06	4.28	4.51	4.76

* The FY88 Estimated Amount was one half.

TABLE A-3 Cost per Service for PRIMUS at POM

Service	FY88*	FY89	FY90	FY91	FY92
Clinic visit Estimated Amount 24,000	58.09	70.23	74.22	78.10	82.35
Clinic visit in excess of 24,000 Estimated Amount 24,000	28.51	33.53	35.31	33.17	39.12
Short visit Estimated Amount 3,000	17.88	18.86	19.90	20.99	22.14
Prescription Refills and Immunologicals not Given as a Clinic Visit Estimated Amount 36,859	8.90	9.35	9.83	10.33	10.86
Dispensing fee for Prescription Refills Estimated Amount 36,000	3.00	3.17	3.34	3.52	3.71
Administration fee for Immunizations Estimated Amount 4,000	3.85	4.06	4.28	4.51	4.76
Optometry visit Estimated Amount 4,000	20.24	21.35	22.52	23.76	25.07

* The FY88 Estimated Amount was one half.

7. Payment of the Contract

Tables A-2 and A-3 reflect the cost per visit for the PRIMUS at Salinas and POM respectively, for fiscal years 1988 through 1992. These costs in future years should be valid if the contract options are exercised. As may be expected, the cost per year increases.

The PRIMUS contract was issued by the U. S. Army Health Services Command in Fort Sam Houston, Texas. The Contracting Officer's Representative (COR) is located at Fort Ord, California. The COR informs the comptroller of the estimated amount of visits, for the obligation of funds, at the beginning of the quarter.

The contractor then performs the work and is paid upon submission of proper invoices and certification by the COR. As with any contract, there must be a statement that the services received and accepted. The COR will quarterly perform an inspection prior to certifying the invoice for payment. The inspection consists of conducting a review of medical records randomly selected by a computer. Upon completion of the review, either the invoice is paid, or an adjustment is made to the invoice. Adjustments are made based on the percentage of errors found in the medical records.

The workload and cost data of the PRIMUS clinics is reflected in the MEPRS. The PRIMUS clinics are considered

as one entity on MEPRS, though there are two separate clinics.

C. COMPARISON OF NAVCARE and PRIMUS

1. Differences

PRIMUS has a decentralized concept, and NAVCARE has a centralized concept. With PRIMUS, the contracting officer's representative (COR) is responsible for certifying the invoice for payment and discussing the differences with the contractor's program manager. With NAVCARE, the contracting officer technical representative, certifies the invoice for payment, however, any differences are resolved between Naval Regional Contracting Office in Philadelphia and the contractor.

PRIMUS workload and cost data is included in MEPRS. NAVCARE is not included in the Medical Expense and Performance Reporting System (MEPRS). When comparing the data, this must be considered.

At PRIMUS, the COR works for the commanding officer of the hospital. At NAVCARE the COTR works for the Naval Regional Contracting Office in Philadelphia. The PRIMUS COR has more control monitoring the contract, in regards to payment and response of the contractor. NAVCARE has less control in monitoring the contract.

2. Similarities

Both contracts provide family practice/primary health care services for Armed Services beneficiaries. They are an alternative sources of health care. Beneficiaries may receive more satisfaction, as the military treatment facility (MTF). may be hard to access.

Both contracts in the future plan to expand their services to include mammographies and well-baby clinics. It is felt that by expanding the services, there will be better access to the health care system, which will lead to greater satisfaction by the beneficiary. In addition, this will allow the MTF to concentrate on inpatient care. A comparison of features between NAVCARE and PRIMUS is presented in Table A-4.

TABLE A-4 A Comparison of NAVCARE/PRIMUS Differences

FEATURE	NAVCARE	PRIMUS
Contractor	PHP Health Care Corp, Alexandria, VA	Sisters of Charity of the Incarnate Word Health Care System, Houston, TX.
Beneficiary Restrictions	None	Salinas-No active duty during normal working hours. Presidio-Required source of care for Naval Postgraduate School and Presidio of Monterey Personnel.
Hours of Operation	0700-2000 M-F 0700-1600 Sat,Sun,Hol.	0700-2000 M-F 0800-1500 Sat,Sun,Hol.
Eligibility Verification	Required on all patients	Required on 25 percent of the patients.
Maximum Turnaround Time	Two hours for 89 percent of the patients.	Two hours for 85 percent of the patients.
Contract Certification Inspections	Twice per month	Quarterly.
Source of Payment	Naval Regional Contracting Center, Philadelphia.	Fort Ord.
Inclusion of Workload and Cost Data in MEPRS	No	Yes
Project Manager or Alternate Availability	Must be present 40 hours per week and available within 30 minutes during all hours of operation	Unstated.
Project Manager Qualifications	Bachelors degree in health care or business, 5 years experience in health field.	Unstated.
Medical Director or Alternate Availability	Unstated.	Must be available at all times.

TABLE A-4 A Comparison of NAVCARE/PRIMUS Differences (cont)

FEATURE	NAVCARE	PRIMUS
Medical Director Qualifications	Board Certified, State License, ACLS Certified.	Board Certified.
Charge Nurse Qualifications	BS + 5 years experience or AS + 7 years experience or Certificate + 9 years experience; and state license, BCLS Certified.	Position not in the contract.
Other Nursing Personnel Qualifications	State license, BCLS Certification.	B.S in Nursing. Conform to JCAH requirements.
Physicians	Board Certified in Family Practice, Internal Medicine, Pediatrics, OB/GYN, or Emergency Medicine. Unrestricted state license, Drug Enforcement Agency (DEA) registration, ACLS certified.	Current license.

APPENDIX B

DESCRIPTION OF MEPRS FUNCTIONAL ACCOUNTS

Inpatient Care: Provides examination, diagnosis, treatment and prompt and proper disposition of inpatients appropriate to the specialty/subspecialty under which the patient is being care. Costs include operating expenses in the six inpatient summary accounts of medical care, surgical care, obstetrical and gynecological care, pediatric care, orthopedic care and psychiatric care.

Ambulatory Care: Provides comprehensive primary medical care; emergency medical care; diagnostic service, care, and treatment; minor surgical procedures; medical examinations; mental health consultation; and proper medical disposition of inpatients and outpatients who are authorize beneficiaries. Costs include operating expenses in the eleven ambulatory care accounts of medical care, surgical care, obstetrical and gynecological care, pediatric care, orthopedic care, psychiatric/mental care, flight medicine care, and underseas medicine care.

Dental Care: Provides comprehensive dental care for Armed Forces members; provides comprehensive dental care for certain former members subject to the availability of space and facilities and capabilities of the dental staff; provides dental care for dependents in facilities of the

Armed Services, subject to the availability of space and facilities and the capabilities of the dental staff. Costs include all operating expenses of Dental Services, Type 3 Dental Prosthetic Laboratory (prepare casts and models, repair dentures, finish dentures) and Type 2 Dental Prosthetic Laboratory (on-the-job training for dental technicians, full and partial denture fabrication).

Ancillary Services: Services provided in the care of patients, by assisting and augmenting the talents of attending physicians and dentists in diagnosing and treating human ills. Costs include operating expenses in the summary ancillary accounts of pharmacy, pathology, radiology, special procedures services, central sterile supply/material service, surgical services, same day services, rehabilitative services, and nuclear medicine.

Support Services: Support services accumulates expenses necessary to direct and support the missions assigned to the MTF. It includes: depreciation; command, management and administration; support services - nonreimbursable; support services - funded/reimbursable; material services; housekeeping; biomedical equipment repair; laundry service; inpatient food service; inpatient affairs; ambulatory care administration. The above are the costs for the support services.

Special Programs: Special programs account are the expenses of an MTF that are incurred as a result of

performing those portions of its military mission other than direct patient care. It includes: specified health related programs; public health services; health care services support; military unique medical activities; patient movement and military patient administration. The above are the cost categories for special programs.

APPENDIX C

DOD Annual Composite Standard Rates Table
as of 22 August 1989

	Service and Grade	Grade Abbreviation	Standard Monthly Pay
ARMY	AE1	PV1	1541
	AE2	PV2	1660
	AE3	PVC	1755
	AE4	SP4	2038
	AE5	SGT	2448
	AE6	SSG	2888
	AE7	SFC	3382
	AE8	MSG	3993
	AE9	SGM	4814
	AO1	2LT	2930
	AO2	1LT	3895
	AO3	CPT	4979
	AO4	MAJ	6184
	AO5	LTC	7310
	AO6	COL	8807
	AO7	BG	9466
	AO8	MG	10550
	AO9	LTG	10658
	AW1	WO-1	3353
	AW2	WO-2	3962
	AW3	WO-3	4728
	AW4	WO-4	5571
AIR FORCE	FE1	AB	1541
	FE2	AMN	1660
	FE3	A1C	1755
	FE4	SRA	2038
	FE5	SSGT	2448
	FE6	TSGT	2888
	FE7	MSGT	3882
	FE8	SMSGT	3993
	FE9	CMSGT	4814

	Service and Grade	Grade Abbreviation	Standard Monthly Pay
AIR FORCE (cont)	FO1	2LT	2930
	FO2	1LT	3895
	FO3	CPT	4979
	FO4	MAJ	6184
	FO5	LTC	7310
	FO6	COL	8807
	FO7	BG	9466
	FO8	MG	10550
	FO9	LTG	10658
NAVY	NE1	SR	1541
	NE2	SA	1660
	NE3	SN	1755
	NE4	PO3	2038
	NE5	PO2	2448
	NE6	PO1	2888
	NE7	CPO	3382
	NE8	SCPO	3993
	NE9	MCPO	4814
	NO1	ENS	2930
	NO2	LTJG	3895
	NO3	LT	4979
	NO4	LCDR	6184
	NO5	CDR	7310
	NO6	CPT	8807
	NO7	RADMLH	9466
	NO8	RADM	10550
	NO9	VADM	10658
	NW1	CWO1	3353
	NW2	CWO2	3962
	NW3	CWO3	4728
	NW4	CWO4	5571

MEPRS PART 1
NAVHOSP OAKLAND
4TH QTR, FY 88

FJ	1836	437	0	2273	0	2273
FJA	1836	437	0	2273	0	2273
*FJAA	1836	437	0	2273	0	2273
*FJAB	0	0	0	0	0	0
*FJAC	0	0	0	0	0	0
*FJAD	0	0	0	0	0	0
*FJAE	0	0	0	0	0	0
*FJAF	0	0	0	0	0	0
FL	19714	5762	0	25476	0	25476
FLA	19714	5762	0	25476	0	25476
*FLAA	19714	5762	0	25476	0	25476
*TOTAL	21320023	**********			0	21320023

PREPARED: 89 JAN 31 1618 HRS DETAIL UNIT COST REPORT PCN NAA-Q14
FACILITY NAME: NAVAL HOSPITAL OAKLAND
FACILITY CODE: 000619 DOD REGION: C2
QUARTER 4 : 01 JUL 88 - 30 SEP 88
----------PART I - DIRECT PATIENT CARE ----------
SECTION 1 - INPATIENT SERVICES

ACCT	DESCRIPTION	INPATIENT DISCHARGES	TOTAL EXPENSES	CLINICIANS INPAT SALARIES	OCCUPIED BED DAYS	COST PER OED
AAA	INTERNAL MEDICINE	416	1563696	129653	2982	524.37
AAB	CARDIOLOGY	40	114810	11684	150	765.40
AAC	CORONARY CARE	66	498505	11419	370	1347.31
AAH	INTENSIVE CARE (MEDICAL)	5	268247	2738	148	1812.47
AAX	COST POOLS	0	0	0	0	0.00
AAZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0	0.00
ABA	GENERAL SURGERY	394	1100529	94871	1743	629.59
ABB	CARDIOVASCULAR AND THORACIC SU	38	248692	12310	249	998.76
ABC	INTENSIVE CARE (SURGICAL)	4	424107	947	215	1972.59
ABD	NEUROSURGERY	30	227140	4837	324	701.04
ABE	OPHTHALMOLOGY	30	68746	17928	36	1909.61
ABF	ORAL SURGERY	36	90297	10403	85	1062.31
ABG	OTORHINOLARYNGOLOGY	331	528980	46430	927	570.65
ABI	PLASTIC SURGERY	60	227063	24129	334	679.82
ABK	UROLOGY	104	220244	23551	318	692.59
ABX	COST POOLS	0	0	0	0	0.00
ABZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0	0.00
ACA	GYNECOLOGY	233	479089	32515	697	687.35
ACB	OBSTETRICS	453	865078	31534	1565	552.76
ACX	COST POOLS	0	0	0	0	0.00
ADA	PEDIATRICS	126	284378	32572	500	568.75
ADB	OBD/BASINETT DAYS	357	348344	2044	909	383.21
ADC	NEONATAL ICU	13	291319	19765	361	806.97
ADX	COST POOLS	0	0	0	0	0.00
ADZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0	0.00
AEA	ORTHOPEDICS	375	1388505	76639	2027	685.00
AEX	COST POOLS	0	0	0	0	0.00

ACCT	DESCRIPTION	TOTAL EXPENSES	VISITS	INPAT VISITS	COST PER TOT VIST
BAA	INTERNAL MEDICINE CLINIC	595086	2334	476	211.77

ACCT	DESCRIPTION	TOTAL EXPENSES	OUTPATIENT VISITS	INPAT VISITS	COST PER TOT VIST
BAC	CARDIOLOGY CLINIC	184970	2739	0	67.53
BAF	ENDOCRINOLOGY (METABOLISM) CLI	79465	350	0	227.04
BAG	GASTROENTEROLOGY CLINIC	26204	238	0	110.10
BAH	HEMATOLOGY CLINIC	136743	711	19	187.32
BAJ	NEPHROLOGY CLINIC	71955	507	136	111.91
BAK	NEUROLOGY CLINIC	117403	1105	352	80.59
BAL	NUTRITION CLINIC	7679	373	406	9.86
BAN	PULMONARY DISEASE CLINIC	48366	663	24	54.53
BAO	RHEUMATOLOGY CLINIC	25025	188	0	133.11
BAP	DERMATOLOGY CLINIC	112012	1818	0	61.61
BAX	COST POOLS	0	0	0	0.00
BAZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0.00
BBA	GENERAL SURGERY CLINIC	427196	2611	0	163.61
BBB	CARDIOVASCULAR AND THORACIC SU	44547	497	0	89.63
BBC	NEUROSURGERY CLINIC	34005	189	503	49.14
BBD	OPHTHALMOLOGY CLINIC	203910	986	0	206.81
BBF	OTORHINOLARYNGOLOGY CLINIC	371229	5081	0	73.06
BBG	PLASTIC SURGERY CLINIC	49605	733	0	67.67
BBI	UROLOGY CLINIC	213661	2267	0	94.25
BBX	COST POOLS	0	0	0	0.00
BBZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0.00
BCA	FAMILY PLANNING CLINIC	19863	368	0	53.98
BCB	GYNECOLOGY CLINIC	373472	3790	0	98.54
BCC	OBSTETRICS CLINIC	243464	2793	0	87.18
BCX	COST POOLS	0	0	0	0.00
BDA	PEDIATRIC CLINIC	260440	3761	0	69.25
BDB	ADOLESCENT CLINIC	68530	1161	0	59.03
BDC	WELL BABY CLINIC	18576	1091	0	17.03
BDX	COST POOLS	0	0	0	0.00
BEA	ORTHOPEDIC CLINIC	618939	5030	0	123.05
BEB	CAST CLINIC	30251	1122	0	26.96
BEC	HAND SURGERY CLINIC	31689	262	0	120.95

BEE	ORTHOPEDIC APPLIANCE CLINIC	106366	473	0	224.88
BEF	PODIATRY CLINIC	592	0	0	0.00
BEX	COST POOLS	0	0	0	0.00
BFD	MENTAL HEALTH CLINIC	112586	641	0	175.64
BFE	SOCIAL WORK CLINIC	58075	235	272	114.55
BFF	SUBSTANCE ABUSE CLINIC	18566	475	79	33.51
BHA	PRIMARY CARE CLINICS	443383	7062	0	62.78
BHC	OPTOMETRY CLINIC	75985	1703	0	44.61
BHD	AUDIOLOGY CLINIC	79275	1154	0	68.70
BHE	SPEECH PATHOLOGY CLINIC	6653	169	0	39.37
BHF	COMMUNITY HEALTH CLINIC	0	0	0	0.00
BHX	COST POOLS	0	0	0	0.00
BIA	EMERGENCY MEDICAL CARE	803667	4960	0	162.03
	TOTAL	6119433	59840	2267	98.53

SECTION 3 - DENTAL HEALTH SERVICES

ACCT	DESCRIPTION	DENTAL TOTAL EXPENSES	WORKLOAD	COST PER UNIT
CAAA	DENTAL SERVICES	331760	17840	18.59
CAXX	COST POOLS	0	0	0.00
CCAA	TYPE 2 DENTAL PROSTHETIC LABOR	93944	8678	10.82
	TOTAL	425704	0	0.00

PART II - ANCILLARY SERVICES

ACCT	DESCRIPTION	DIRECT AND SUPPORT EXPENSE	ANCILARY COST	TOTAL EXPENSE ASSIGNED	ANCILLARY WORKLOAD TOTALS	COST PER UNIT
DAA	PHARMACY	1614188	0	1614188	219086	7.3678

FACILITY NAME: NAVAL HOSPITAL OAKLAND
FACILITY CODE: 000619 DCD REGION: C2
QUARTER 4 : 01 JUL 88 - 30 SEP 88

PART II - ANCILLARY SERVICES

ACCT	DESCRIPTION	DIRECT AND SUPPORT EXPENSE	ANCILARY COST	TOTAL EXPENSE ASSIGNED	ANCILLARY WORKLOAD TOTALS	COST PER UNIT
DBA	CLINICAL PATHOLOGY	1039588	75454	1115042	1289181	0.8649
DBB	ANATOMICAL PATHOLOGY	149372	16156	165528	258839	0.6395
DBC	BLOOD BANK	130063	14172	144235	241242	0.5978
DBX	COST POOLS	103648	626	0	0	0.0000
DCA	DIAGNOSTIC RADIOLOGY	897398	21408	918806	98032	9.3725
DCB	THERAPEUTIC RAIDOLOGY	70356	5056	75412	5919	12.7406
DCX	COST POOLS	21864	0	0	0	0.0000
DDA	ELECTROCARDIOGRAPHY	5343	0	5343	4824	1.1075
DDB	ELECTROENCEPHALOGRAPHY	2260-	0	2260-	160	14.1250-
DDC	ELECTRONEUROMYOGRAPHY	0	0	0	88	0.0000

DFA	ANESTHESIOLOGY	431822	64877	496699	309759	1.6035
DFB	SURGICAL SUITE	737114	103439	840553	591601	1.4208
DFC	RECOVERY ROOM	102149	11976	114125	99790	1.1436
DGA	SAME DAY SURGERY	92753	4576	97329	136838	0.7112
DGB	HEMODIALYSIS	40799	7722	48521	39330	1.2336
DHA	INHALATION/RESPIRATORY THERAPY	121484	39728	161212	11403	14.1376
DHD	PHYSICAL THERAPY	233247	1790	235037	6365	36.9264
DIA	NUCLEAR MEDICINE	134302	3426	137728	136841	1.0064
	TOTAL	6413172	413726	6657440	3622981	0.0000

EXPENSE ASSIGNMENT SYSTEM PCN NAA-C15

MEDICAL EXPENSE AND PERFORMANCE REPORT

PREPARED: 89 JAN 31 1618 HRS
FACILITY NAME: NAVAL HOSPITAL OAKLAND.
FACILITY CODE: 000619 DOD REGION: C2
QUARTER 4: 01 JUL 88 - 30 SEP 88

PART I MEDICAL EXPENSE REPORT

SECTION 1 - INPATIENT SERVICES

ACCT	DESCRIPTION	TOTAL EXPENSES	CLINICIAN SALARIES	OCCUPIED BED DAYS	COST PER OBD	TOTAL DISPS	COST PER DISP	HEALTH CARE UNITS (HCUS)	COST PER HCU	ALOS	ADPL
AAA	INTERNAL MEDICINE	1563696	129653	2982	524.38	416	3758.88	449	3482.62	7.2	32.
AAB	CARDIOLOGY	114810	11684	150	765.40	40	2870.25	24	4783.75	3.8	1.
AAC	CORONARY CARE	498505	11419	370	1347.31	66	7553.11	57	8745.70	5.6	4.
AAH	INTENSIVE CARE (MEDICAL)	268247	2738	148	1812.43	5	53649.40	21	12773.67	29.6	1.
AAZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0.00	0	0.00	0	0.00	0.0	0.
	SUBTOTAL	2445258	155494	3650	669.93	527	4639.96	551	4437.25	6.9	39.
ABA	GENERAL SURGERY	1100529	94871	1748	629.59	394	2793.22	395	2786.15	4.4	19.
ABB	CARDIOVASCULAR AND THORACIC SURGER	248692	12310	249	998.76	38	6544.53	50	4973.84	6.6	2.
ABC	INTENSIVE CARE (SURGICAL)	424107	947	215	1972.59	4	106026.75	34	12473.74	53.8	2.
ABD	NEUROSURGERY	227140	4837	324	701.05	30	7571.33	59	3849.83	10.8	3.
ABE	OPHTHALMOLOGY	68748	17928	36	1909.61	30	2291.53	15	4583.07	1.2	0.
ABF	ORAL SURGERY	90297	10403	85	1062.32	36	2508.25	25	3611.88	2.4	0.
ABG	OTORHINOLARYNGOLOGY	528980	46430	927	570.64	331	1598.13	248	2132.98	2.8	10.
ABI	PLASTIC SURGERY	227063	24129	334	679.83	60	3784.38	71	3198.07	5.6	3.
ABK	UROLOGY	220244	23851	318	692.59	104	2117.73	82	2685.90	3.1	3.
ABZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0.00	0	0.00	0	0.00	0.0	0.
	SUBTOTAL	3135798	235706	4236	740.27	1027	3053.36	979	3203.06	4.1	48.
ACA	GYNECOLOGY	479089	32515	697	687.36	233	2056.18	153	3131.30	3.0	7.
ACB	OBSTETRICS	865078	31534	1565	552.77	453	1909.66	329	2629.42	3.5	17.
	SUBTOTAL	1344167	64049	2262	594.24	686	1959.43	482	2788.73	3.3	24.
ADA	PEDIATRICS	284378	32572	500	568.75	126	2256.95	75	3791.68	4.0	5.
ADB	OBD/BASINETT DAYS	348344	2044	909	383.22	357	975.75	152	2291.74	2.5	9.
ADC	NEONATAL ICU	291319	19768	361	806.98	13	22409.15	45	6473.76	27.8	3.
ADZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0.00	0	0.00	0	0.00	0.0	0.

SUBTOTAL	609000	39286	2144	284.05	123	4951.22	270	2255.56	17.4	23.
TOTAL	9846767	625558	16089	612.02	3234	3044.76	2939	3350.38	5.0	174.

PAGE 61

REPLACES DD FORMS 2202 AND 2252, WHICH ARE OBSOLETE.

EXPENSE ASSIGNMENT SYSTEM PCN NAA-615

MEDICAL EXPENSE AND PERFORMANCE REPORT

PREPARED: 89 JAN 31 1618 HRS
FACILITY NAME: NAVAL HOSPITAL OAKLAND
FACILITY CODE: 000619 DOD REGION: 62
QUARTER 4: 01 JUL 88 - 30 SEP 88

PART I MEDICAL EXPENSE REPORT

SECTION 2 - AMBULATORY CARE

ACCT	DESCRIPTION	TOTAL EXPENSES	INPTNT VISITS	OUTPTNT VISITS	TOTAL VISITS	COST PER TOTAL VISITS	HEALTH CARE UNITS (HCUS)	COST PE HCU
BAA	INTERNAL MEDICINE CLINIC	595086	476	2334	2810	211.77	51	11668.3
BAC	CARDIOLOGY CLINIC	184970	0	2739	2739	67.53	60	3082.8
BAF	ENDOCRINOLOGY (METABOLISM) CLINIC	79465	0	350	350	227.04	8	9933.1
BAG	GASTROENTEROLOGY CLINIC	26204	0	238	238	110.10	5	5240.8
BAH	HEMATOLOGY CLINIC	136743	19	711	730	187.32	16	8546.4
BAJ	NEPHROLOGY CLINIC	71955	136	507	643	111.91	11	6541.3
BAK	NEUROLOGY CLINIC	117403	352	1105	1457	80.58	24	4891.7
BAL	NUTRITION CLINIC	7679	406	373	779	9.86	8	959.8
BAN	PULMONARY DISEASE CLINIC	48366	24	863	887	54.53	19	2545.5
BAO	RHEUMATOLOGY CLINIC	25025	0	188	188	133.11	4	6256.2
BAP	DERMATOLOGY CLINIC	112012	0	1818	1818	61.61	40	2800.3
BAZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0	0.00	0	0.0
	SUBTOTAL	1404908	1413	11226	12639	111.16	246	5711.0
BBA	GENERAL SURGERY CLINIC	427196	0	2611	2611	163.61	73	5852.0
BBB	CARDIOVASCULAR AND THORACIC SURGERY CLINIC	44547	0	497	497	89.63	14	3181.9
BBC	NEUROSURGERY CLINIC	34005	503	189	692	49.14	5	6801.0
BBD	OPHTHALMOLOGY CLINIC	203910	0	986	986	206.81	28	7282.5
BBF	OTORHINOLARYNGOLOGY CLINIC	371229	0	5081	5081	73.06	142	2614.2
BBG	PLASTIC SURGERY CLINIC	49605	0	733	733	67.67	21	2362.1
BBI	UROLOGY CLINIC	213661	0	2267	2267	94.25	63	3391.4
BBZ	ACCTS NOT OTHERWISE CLASSIFIED	0	0	0	0	0.00	0	0.0
	SUBTOTAL	1344153	503	12364	12867	104.47	346	3834.8
BCA	FAMILY PLANNING CLINIC	19863	0	368	368	53.98	8	2482.8
BCB	GYNECOLOGY CLINIC	373472	0	3790	3790	98.54	80	4668.4
BCC	OBSTETRICS CLINIC	243484	0	2793	2793	87.18	59	4126.8
	SUBTOTAL	636819	0	6951	6951	91.62	147	4332.1
BDA	PEDIATRIC CLINIC	260440	0	3761	3761	69.25	64	4069.3
BDB	ADOLESCENT CLINIC	68530	0	1161	1161	59.03	20	3426.5
BDC	WELL BABY CLINIC	18576	0	1091	1091	17.03	19	977.5
	SUBTOTAL	347544	0	6013	6013	57.80	103	337.

118

1 EXPENSE ASSIGNMENT SYSTEM PCN NAA-015
MEDICAL EXPENSE AND PERFORMANCE REPORT

PREPARED: 89 JAN 31 1618 HRS
FACILITY NAME: NAVAL HOSPITAL OAKLAND
FACILITY CODE: 000619 DOD REGION: 02
QUARTER 4: 01 JUL 88 - 30 SEP 88

PART I MEDICAL EXPENSE REPORT

SECTION 2 - AMBULATORY CARE

ACCT	DESCRIPTION	TOTAL EXPENSES	INPTNT VISITS	OUTPTNT VISITS	TOTAL VISITS	COST PER TOTAL VISITS	HEALTH CARE UNITS (HCUS)	COST HC
BEA	ORTHOPEDIC CLINIC	618939	0	5030	5030	123.05	141	4389
BEB	CAST CLINIC	30251	0	1122	1122	26.96	31	975
BEC	HAND SURGERY CLINIC	31689	0	262	262	120.95	7	4527
BEE	ORTHOPEDIC APPLIANCE CLINIC	106366	0	473	473	224.88	13	8182
BEF	PODIATRY CLINIC	592	0	0	0	0.00	0	0
	SUBTOTAL	787837	0	6887	6887	114.39	192	4103
BFD	MENTAL HEALTH CLINIC	112586	0	641	641	175.64	17	6622
BFE	SOCIAL WORK CLINIC	58075	272	235	507	114.55	8	9679
BFF	SUBSTANCE ABUSE CLINIC	18566	79	475	554	33.51	12	1547
	SUBTOTAL	189227	351	1351	1702	111.18	35	5406
BHA	PRIMARY CARE CLINICS	443383	0	7062	7062	62.78	148	2995
BHC	OPTOMETRY CLINIC	75965	0	1703	1703	44.61	36	2110
BHD	AUDIOLOGY CLINIC	79275	0	1154	1154	68.70	24	3303
BHE	SPEECH PATHOLOGY CLINIC	6653	0	169	169	39.37	4	1663
BHF	COMMUNITY HEALTH CLINIC	0	0	0	0	0.00	0	0
	SUBTOTAL	605276	0	10088	10088	60.00	212	2855
BIA	EMERGENCY MEDICAL CARE	803667	0	4960	4960	162.03	134	5997
	SUBTOTAL	803667	0	4960	4960	162.03	134	5997
	TOTAL	6119431	2267	59840	62107	98.53	1415	4324

APPENDIX E

PATIENT EXIT QUESTIONNAIRE CODING SCHEME

1. Military Service Affiliation

1 Navy	4 Air Force
2 Army	5 Coast Guard
3 Marine Corps	6 Other (specify)_____

2. Patient status

1 Active Duty	4 Dependent of retiree
2 Active Duty Dependent	5 Other (specify)_____
3 Retired	

3. Where are you receiving your care today?

1 NAVHOSP Oakland
2 NAVCARE Clinic (Applies only to the San Francisco Bay area)
3 PRIMUS Clinic (Applies only to the Monterey Peninsula area)
4 Silas B. Hays Army Hospital

4. Refer to your answer in question #3. Why did you choose this source of care over the other choices?

	Factor	Not a factor
a. Required care unavail at other sources.	1	2
b. Closest facility.	1	2
c. Shorter waiting times.	1	2
d. Appointment availability.	1	2
e. Better service.	1	2
f. Referred from other source.	1	2
g. Better hours of operation.	1	2
h. Other.	1	2

5.a. How often do you use the MTF outpatient services?

1 More than once per month	3 2 - 3 times per year
2 About once per month	4 Less than once per year
	5 Do not use MTF outpatient services

b. How often do you use NAVCARE/PRIMUS?

1 More than once per month	3 2 - 3 times per year
2 About once per month	4 Less than once per year
	5 Do not use NAVCARE/PRIMUS

6. Are you satisfied with the medical services available in NAVCARE/PRIMUS?

1 Very satisfied
2 Moderately satisfied
3 Unsatisfied
4 Not Applicable

7.a. Does the MTF offer the services you required?

1 Yes 2 No

b. Does NAVCARE/PRIMUS offer the services you required?

1 Yes 2 No

c. Did the services offered make a difference in your decision as to the type of facility you chose?

1 Yes 2 No

****CONTINUED ON BACK - PLEASE TURN FORM OVER***

8.a. Distance that you normally have to travel to the MTF.

1 less than 10 miles	4 31 - 40 miles
2 11 - 20 miles	5 41 - 50 miles
3 21 - 30 miles	6 greater than 51 miles

b. Distance that you normally have to travel to NAVCARE/PRIMUS.

1 less than 10 miles	4 31 - 40 miles
2 11 - 20 miles	5 41 - 50 miles
3 21 - 30 miles	6 greater than 51 miles

c. Did the location make a difference in your decision as to the type of facility you chose?

1 Yes 2 No

9.a. At the MTF, were you able to get an appointment within:

1 Less than 7 calendar days
2 8 - 14 calendar days
3 15 - 21 calendar days
4 Greater than 22 calendar days
5 Not applicable

b. At the PRIMUS/NAVCARE, were you able to get an appointment within:

1 Less than 7 calendar days
2 8 - 14 calendar days
3 15 - 21 calendar days
4 Greater than 22 calendar days
5 Not applicable

c. Did the appointment availability make a difference in your decision as to the type of facility you chose?

1 Yes 2 No

10.a. Have you or your family used CHAMPUS before?

1 Yes 2 No If yes, please answer the next question.

b. Do you or your family still use CHAMPUS?

1 Yes 2 No If yes, please answer the next question

c. If yes, for what reason?

	Factor	Not a factor
(1) Inpatient care	1	2
(2) Other sources too far	1	2
(3) Services unavailable elsewhere	1	2
(4) Shortage of appointments	1	2
(5) Excessive waiting elsewhere	1	2
(6) Better care	1	2
(7) Emergencies only	1	2
(8) Other	1	2

NOTE: **Unanswered questions should be coded with a 9 !**

APPENDIX F

PATIENT QUESTIONNAIRE DATA
SPSS/PC+ "FREQUENCIES" COMMAND OUTPUT

SERVICE 1. Military Service Affiliation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Navy	1	195	55.2	55.4	55.4
Army	2	92	26.1	26.1	81.5
USMC	3	16	4.5	4.5	86.1
USAF	4	34	9.6	9.7	95.7
USCG	5	14	4.0	4.0	99.7
Other service	6	1	.3	.3	100.0
No answer	9	1	.3	MISSING	
	TOTAL	353	100.0	100.0	

STATUS 2. Patient Status

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
ACDU	1	69	19.5	19.5	19.5
DEP ACDU	2	131	37.1	37.1	56.7
Retired	3	91	25.8	25.8	82.4
DEP retired	4	56	15.9	15.9	98.3
Other status	5	6	1.7	1.7	100.0
	TOTAL	353	100.0	100.0	

LOCATION 3. Where are you receiving care today?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NAVHOSP Oakland	1	84	23.8	23.8	23.8
NAVCARE	2	164	46.5	46.5	70.3
PRIMUS	3	70	19.8	19.8	90.1
SBHAYS	4	35	9.9	9.9	100.0
	TOTAL	353	100.0	100.0	

REASON#1 4. Why did you choose this source of care?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Care unavail other source	1	86	20.5	21.0	21.0
Closest facility	2	131	31.3	31.9	52.9
Less waiting	3	102	24.4	25.0	77.9
Appoint availability	4	19	4.5	4.6	82.5
Better Service	5	23	5.5	5.6	88.1
Referred from other source	6	16	3.8	3.9	92.0
Better hours of operation	7	7	1.7	1.7	93.7
Other	8	26	6.2	6.3	100.0
No answer	9	9	2.1	MISSING	
	TOTAL	419	100.0	100.0	

FREQMTF 5a. How often do you use MTF outpatient services?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
More than once/month	1	26	7.4	8.0	8.0
Once/month	2	57	16.1	17.6	25.6
2-3 Times/year	3	155	43.9	47.8	73.5
Less than once/year	4	55	15.6	17.0	90.4
Do not use MTF outpt services	5	31	8.8	9.6	100.0
No answer	9	29	8.2	MISSING	
	TOTAL	353	100.0	100.0	

FREQNAV 5b. How often do you use NAVCARE/PRIMUS?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
More than once/month	1	28	7.9	8.6	8.6
Once/month	2	55	15.6	17.0	25.6
2-3 Times/year	3	128	36.3	39.5	65.1
Less than once/year	4	48	13.6	14.8	79.9
Do not use NAVCARE/PRIMUS	5	65	18.4	20.1	100.0
No answer	9	29	8.2	MISSING	
	TOTAL	353	100.0	100.0	

SATISFAC 6. Are you satisfied with services available in NAVCARE/PRIMUS?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Very satisfied	1	170	48.2	53.1	53.1
Moderately Satisfied	2	69	19.5	21.6	74.7
Unsatisfied	3	11	3.1	3.4	78.1
Not Applicable	4	70	19.8	21.9	100.0
No Answer	9	33	9.3	MISSING	
	TOTAL	353	100.0	100.0	

SERVMTF 7a. Does the MTF offer the services you require?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	283	80.2	87.9	87.9
No	2	39	11.0	12.1	100.0
No answer	9	31	8.8	MISSING	
	TOTAL	353	100.0	100.0	

SERVNAV 7b. Does NAVCARE/PRIMUS offer the services you require?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	259	73.4	91.2	91.2
No	2	25	7.1	8.8	100.0
No answer	9	69	19.5	MISSING	
	TOTAL	353	100.0	100.0	

SERVDIFF 7c. Did services offered affect your decision on source of care?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	198	56.1	60.6	60.6
No	2	129	36.5	39.4	100.0
No answer	9	26	7.4	MISSING	
	TOTAL	353	100.0	100.0	

DISTMTF 8a. Distance that you normally travel to the MTF:

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Less than 10 miles	1	119	33.7	36.1	36.1
11-20 miles	2	106	30.0	32.1	68.2
21-30 miles	3	44	12.5	13.3	81.5
31-40 miles	4	29	8.2	8.8	90.3
41-50 miles	5	18	5.1	5.5	95.8
More than 50 miles	6	14	4.0	4.2	100.0
No answer	9	23	6.5	MISSING	
	TOTAL	353	100.0	100.0	

DISTNAV 8b. Distance you normally travel to NAVCARE/PRIMUS:

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Less than 10 miles	1	134	38.0	44.8	44.8
11-20 miles	2	70	19.8	23.4	68.2
21-30 miles	3	44	12.5	14.7	82.9
31-40 miles	4	26	7.4	8.7	91.6
41-50 miles	5	12	3.4	4.0	95.7
More than 50 miles	6	13	3.7	4.3	100.0
No answer	9	54	15.3	MISSING	
	TOTAL	353	100.0	100.0	

DISTDIFF 8c. Did the location affect your decision on source of care?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	148	41.9	45.1	45.1
No	2	180	51.0	54.9	100.0
No answer	9	25	7.1	MISSING	
	TOTAL	353	100.0	100.0	

APPMTF 9a. At the MTF, were you able to get an appointment within:

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Less than 7 days	1	92	26.1	28.6	28.6
8-14 days	2	63	17.8	19.6	48.1
15-21 days	3	42	11.9	13.0	61.2
More than 21 days	4	54	15.3	16.8	78.0
Not applicable	5	71	20.1	22.0	100.0
No answer	9	31	8.8	MISSING	
	TOTAL	353	100.0	100.0	

APPNAV 9b. At NAVCARE/PRIMUS, was appoint available within:

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Less than 7 days	1	159	45.0	52.3	52.3
8-14 days	2	11	3.1	3.6	55.9
15-21 days	3	6	1.7	2.0	57.9
More than 21 days	4	8	2.3	2.6	60.5
Not applicable	5	120	34.0	39.5	100.0
No answer	9	49	13.9	MISSING	
	TOTAL	353	100.0	100.0	

APPDIFF 9c. Did appointment availability affect decision on source of care?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	187	53.0	57.0	57.0
No	2	141	39.9	43.0	100.0
No answer	9	25	7.1	MISSING	
	TOTAL	353	100.0	100.0	

CHMPPREV 10a. Have you or family used CHAMPUS before?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	193	54.7	57.3	57.3
No	2	144	40.8	42.7	100.0
No answer	9	16	4.5	MISSING	
	TOTAL	353	100.0	100.0	

CHMPPRES 10b. Do you or your family still use CHAMPUS?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1	102	28.9	55.1	55.1
No	2	83	23.5	44.9	100.0
No answer	9	168	47.6	MISSING	
	TOTAL	353	100.0	100.0	

CHREAS#1 10c. If you still use CHAMPUS, for what reason?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Inpatient care	1	12	3.2	9.6	9.6
Other sources too far	2	13	3.4	10.4	20.0
Services unavail elsewhere	3	46	12.2	36.8	56.8
Shortage of appointments	4	9	2.4	7.2	64.0
Excessive waiting time	5	15	4.0	12.0	76.0
Better care	6	13	3.4	10.4	86.4
Emergencies only	7	8	2.1	6.4	92.8
Other	8	9	2.4	7.2	100.0
No answer	9	253	66.9	MISSING	
	TOTAL	378	100.0	100.0	

Note: The total number of responses for questions 4 (419) and 10c (378) exceed the total number of respondents (353) because of multiple answers to those questions.

APPENDIX G

WORKLOAD AND COST SUMMARIES

NAVHOSP OAKLAND WORKLOAD AND COST SUMMARY BY FISCAL YEAR							
YEAR	QUARTER	TOTAL ADMIT	TOTAL GOVT COST	COST PER ADMISSION	PRIMARY CARE OPV	PRIMARY CARE COST	COST/VISIT
FY86	1	3387	8753934	2584.57	47655	3115388	65.37
	2	3449	7976010	2312.56	44800	2580258	57.60
	3	3420	8275652	2419.78	41995	2628625	62.59
	4	3111	8459289	2719.15	34579	2523543	72.98
FY87	1	3159	8323262	2634.78	35037	2311539	65.97
	2	3142	8593785	2735.13	33862	2699226	79.71
	3	3396	8937489	2631.77	36337	2789884	76.78
	4	3511	9931762	2828.76	35158	3345197	95.15
FY88	1	3277	8594170	2622.57	34634	2524433	72.89
	2	3464	9947373	2871.64	35311	2553798	72.32
	3	3272	9108786	2783.86	25857	2640343	102.11
	4	3234	9846767	3044.76	32011	3673388	114.75
FY89	1	2994	8598086	2871.77	26328	2475946	94.04
	2	3257	10015164	3074.97	41432	2421846	58.45
	3	3223	10575801	3281.35	28574	1775552	62.14
	4	3112			35348	1605393	45.42

CHAMPUS WORKLOAD AND COST SUMMARY BY FISCAL YEAR FOR NAVHOSP OAKLAND CATCHMENT AREA						
YEAR	TOTAL ADMIT	TOTAL GOVT COST	COST PER ADMISSION	MEDICAL OPV	TOT GOVT MED COSTS	COST PER MED VISIT
FY86	1119	6167405	5511.53	29095	1936123	66.54
FY87	1206	7966997	6606.13	32157	2149725	66.85
FY88	890	6037763	6784.00	31406	2087542	66.47

NAVCARE COST AND WORKLOAD			
FY 88/89	TOTAL COST	TOTAL VISITS	COST PER VISIT
Aug	182634.89	1958	93.28
Sep	235384.08	2552	92.24
Oct	190100.88	2953	64.38
Nov	195518.65	2998	65.22
Dec	201426.47	3045	66.15
Jan	263831.74	3976	66.36
Feb	241474.75	3758	64.26
Mar	230904.58	3659	63.11
Apr	198010.42	3596	55.06
May	213632.85	3712	57.55
Jun	196182.27	3659	53.62
Jul	159769.00	3709	43.08
Aug	147268.64	4220	34.90
Sep	148652.76	4066	36.56
Totals	2804791.98	47861	58.60

APPENDIX G

WORKLOAD AND COST SUMMARIES

SILAS B. HAYS WORKLOAD AND COST SUMMARY BY FISCAL YEAR							
YEAR	QUARTER	TOTAL ADMIT	TOTAL GOVT COST	COST PER ADMISSION	PRIMARY CARE OPV	PRIMARY CARE COST	COST/VISIT
FY86	1	2458	3913855	1592.29	30671	1153814	37.62
	2	2290	3795027	1657.22	31288	1172415	37.47
	3	2170	3867918	1782.45	30798	1143769	37.14
	4	2258	4340025	1922.07	29104	1291069	44.36
FY87	1	2068	3689276	1783.98	28582	1384437	48.44
	2	2283	3711731	1625.81	32348	1477631	45.68
	3	2246	4750082	2114.91	30172	1592484	52.78
	4	2201	4077626	1852.62	30148	1654743	54.89
FY88	1	2674	4885156	1826.91	29355	1611207	54.89
	2	2648	4226501	1596.11	33242	1522013	45.79
	3	2462	4616978	1875.30	32202	1470309	45.66
	4	2628	4998483	1902.01	26750	1385245	51.78
FY89	1	2757	4889733	1773.57	27176	1263396	46.49
	2	2735	4896885	1790.45	27044	1206122	44.60
	3	2927	4975940	1700.01	24310	1210763	49.81
	4				29910	1258755	42.08

CHAMPUS WORKLOAD AND COST SUMMARY BY FISCAL YEAR FOR SILAS B. HAYS CATCHMENT AREA						
YEAR	TOTAL ADMIT	TOTAL GOVT COST	COST PER ADMISSION	MEDICAL OPV	TOT GOVT MED COSTS	COST PER MED VISIT
FY86	730	3404122	4663.18	15772	888746	56.35
FY87	1244	7309907	5876.13	22275	1182510	53.09
FY88	796	4205977	5283.89	22398	1319094	58.89

	PRIMUS PRESIDIO COST & WORKLOAD			PRIMUS SALINAS COST AND WORKLOAD		
FY 88/89	TOTAL COST	TOTAL VISITS	COST PER VISIT	TOTAL COST	TOTAL VISITS	COST PER VISIT
June	139504.39	2704	51.59	297.11	4	74.28
July	201110.12	3743	53.73	59313.02	1030	57.59
Aug	237746.73	4490	52.95	86512.98	1517	57.03
Sep	136521.18	5263	25.94	94716.48	1801	52.59
Oct	281596.25	4686	60.09	118480.02	1860	63.70
Nov	311189.48	4610	67.50	130292.89	1864	69.90
Dec	178714.07	3083	57.97	141763.72	2163	65.54
Jan	354696.97	5687	62.37	176049.14	2749	64.04
Feb	315590.30	5236	60.27	161114.65	2631	61.24
Mar	255329.26	5114	49.93	157733.47	2525	62.47
Apr	145160.70	4849	29.94	138113.22	2322	59.48
May	168205.02	5476	30.72	153710.37	2543	60.44
Jun	151563.55	5150	29.43	143019.05	2466	58.00
Jul	151741.61	5045	30.08	96940.78	2506	38.68
Aug	177527.98	5944	29.87	84845.22	2704	31.38
Sep	177413.31	6005	29.54	85993.10	2794	30.78
TOTALS	3383610.92	77085	43.89	1828895.22	33479	54.63

APPENDIX H

HEALTH CARE COST MODEL

		1986	1987	1988	1989	1990	1991	1992
1	NAVCARE Visits	0	0	4797	43351	43351	43351	43351
2	NAVCARE Costs:							
2a	/Full	0	0	419840	2232576	2234236	2301206	2370319
2b	/Limited	0	0	6002	43270	44536	45879	47260
2c	/Prescriptions	0	0	18	2854	2951	3048	3145
2d	/Immunizations	0	0	379	2302	2372	2442	2512
2e	/Mammography	0	0	19245	121633	125271	129032	132900
2f	/Emergency xport	0	0	364	5648	5846	6050	6262
2g	/Less PRS deductions	0	0	0	-20918.86			
2	/Total	0	0	445847	2387366	2415213	2487658	2562398
3	NAVCARE Cost/Visit	0	0	92.94	55.07	55.71	57.38	59.11
4	NAVCARE Site Prep Amort	0	0	38283	153133	153133	153133	153133
5	Final NAVCARE cost/visit			100.92	58.60	59.25	60.92	62.64
1	PRIMUS Visits (Presidio)	0	0	16200	62184	62184	62184	62184
2	PRIMUS Costs:							
2a	/Full Visit	0	0	679031	2537584	2679058	2717316	2970517
2b	/Short Visit	0	0	11765	64237	67779	71492	75409
2c	/Dispensing Fee	0	0	2121	15032	15838	16692	17593
2d	/Immunizations	0	0	789	6573	6929	7302	7706
2e	/Optometry	0	0	15646	64157	67673	71399	105385
2	/Total	0	0	709352	2687584	2837277	2884200	3176611
3	PRIMUS Cost/Visit	0	0	43.79	43.22	45.63	46.38	51.08
4	PRIMUS Site Prep Amort	0	0	12190	48759	48759	48759	48759
5	Final PRIMUS cost/visit			44.54	44.00	46.41	47.17	51.87
1	PRIMUS Visits (Salinas)	0	0	4348	29127	29127	29127	29127
2	PRIMUS Costs:							
2a	/Full Visit	0	0	233307	1456797	1540436	1621061	1711372
2b	/Short Visit	0	0	4166	61370	64755	68301	72044
2c	/Dispensing Fee	0	0	522	8524	8981	9465	9976
2d	/Immunizations	0	0	15	467	492	519	547
2	/Total	0	0	238011	1527159	1614664	1699346	1793939
3	PRIMUS Cost/Visit	0	0	54.74	52.43	55.44	58.34	61.59
4	PRIMUS Site Prep Amort	0	0	15796	63184	63184	63184	63184
5	Final PRIMUS cost/visit	0	0	58.37	54.60	57.60	60.51	63.76
1	NAVHOSP OPV	169029	140394	131752	167282	167282	167282	167282
2	NAVHOSP OPV Costs	10847814	11145846	11743071	10516869	10516869	10516869	10516869
3	NAVHOSP Cost/OPV	64.18	79.39	89.13	62.87	62.87	62.87	62.87
1	HAYS OPV	121861	121250	138968	185844	185844	185844	185844
2	Hays OPV Costs	4761067	6109295	6846993	8464514	8464514	8464514	8464514
3	Hays Cost/OPV	39.07	50.39	49.27	45.55	45.55	45.55	45.55
1	CHAMPUS OPV (Oak)	29095	32157	32264	39157	39157	39157	39157
2	CHAMPUS OPV Costs (Oak)	1936123	2149725	2144553	2602758	2602758	2602758	2602758
3	CHAMPUS Cost/OPV (Oak)	66.54	66.85	66.47	66.47	66.47	66.47	66.47
1	CHAMPUS OPV (Ft Ord)	15772	22275	25527	36305	36305	36305	36305
2	CHAMPUS OPV Costs (Ft Ord)	888746	1182510	1503399	2138105	2138105	2138105	2138105
3	CHAMPUS Cost/OPV (Ft Ord)	56.35	53.09	58.89	58.89	58.89	58.89	58.89
	TOTAL OPV (Oak)	198124	172551	164016	206439	206439	206439	206439
	TOTAL OPV COSTS (Oak)	12783937	13295571	13887624	13119627	13119627	13119627	13119627
	TOTAL COST/OPV (Oak)	64.52	77.05	84.67	63.55	63.55	63.55	63.55
	TOTAL OPV (Ft Ord)	137633	143525	164495	222149	222149	222149	222149
	TOTAL OPV COSTS (Ft Ord)	5649813	7291805	8350392	10602618	10602618	10602618	10602618
	TOTAL COST/OPV (Ft Ord)	41.05	50.81	50.76	47.73	47.73	47.73	47.73
	AGGREGATE OPV	335757	316076	328511	428588	428588	428588	428588
	AGGREGATE OPV COSTS	18433750	20587376	22238016	23722245	23722245	23722245	23722245
	AGGREGATE COST/OPV	54.90	65.13	67.69	55.35	55.35	55.35	55.35

HEALTH CARE COST MODEL (CONTINUED)

		1986	1987	1988	1989	1990	1991	1992
1	NAVHOSP Admissions	13419	13243	13583	15989	12586	12586	12586
2	NAVHOSP Inpatient Costs	33201981	35769091	37546619	38763229.	38763229	38763229	38763229
3	NAVHOSP Cost/Admission	2474.25	2700.98	2849.41	3079.87	3079.87	3079.87	3079.87
1	HAYS Admissions	9176	8798	10412	10984	10984	10984	10984
2	HAYS Inpatient Costs	15916825	16228715	18727118	19573236	19573236	19573236	19573236
3	HAYS Cost/Admission	1734.61	1844.59	1798.61	1781.98	1781.98	1781.98	1781.98
1	CHAMPUS Admissions (Oak)	1119	1206	890	1110	1110	1110	1110
2	CHAMPUS Inpt Costs (Oak)	6167405	7966997	6037763	7527913	7527913	7527913	7527913
3	CHAMPUS Cost/Adm (Oak)	5511.53	6606.13	6784.00	6784.00	6784.00	6784.00	6784.00
1	CHAMPUS Admissions (Ft Ord)	730	1244	796	1290	1290	1290	1290
2	CHAMPUS Inpt Costs (Ft Ord)	3404122	7309907	4205977	6817421	6817421	6817421	6817421
3	CHAMPUS Cost/Adm (Ft Ord)	4663.18	5876.13	5283.89	5283.89	5283.89	5283.89	5283.89
	TOTAL ADMISSIONS	24444	24491	25275	25970	25970	25970	25970
	TOTAL INPATIENT COSTS	58690333	67274710	66517477	72681799	72681799	72681799	72681799
	AGGREGATE COST/ADMISSION	2401.01	2746.92	2631.75	2798.70	2798.70	2798.70	2798.70
	TOTAL COSTS	77124083	87862086	88755493	96404044	96404044	96404044	96404044

Projected Changes (Input Variables)				
NAVCARE Visits:	0%		CHAMPUS Visits (Ft. Ord):	0%
PRIMUS (Presidio) Visits:	0%		CHAMPUS Visit Costs (Ft. Ord):	0%
PRIMUS (Salinas) Visits:	0%		NAVHOSP Admission Costs:	0%
NAVHOSP Visits:	0%		HAYS Admission Costs:	0%
NAVHOSP Outpatient Costs:	0%		CHAMPUS Inpt. Costs (Oakland):	0%
HAYS Visits:	0%		CHAMPUS Inpt. Costs (Ft. Ord):	0%
HAYS Outpatient Costs:	0%		With/without NAVCARE (1/0):	0
CHAMPUS Visits (Oakland):	0%		With/without PRIMUS (1/0):	0
CHAMPUS Outpt Costs (Oak):	0%			

ALL INPUT VARIABLES SET TO ZERO

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	428588	428588	0.00%	428588	0.00%	428588	0.00%
Total Outpatient Visits, FY 91	428588	428588	0.00%	428588	0.00%	428588	0.00%
Total Outpatient Visits, FY 92	428588	428588	0.00%	428588	0.00%	428588	0.00%
Total Admissions, FY 90	25970	25750	-0.85%	25476	-1.90%	25256	-2.75%
Total Admissions, FY 91	25970	25750	-0.85%	25476	-1.90%	25256	-2.75%
Total Admissions, FY 92	25970	25750	-0.85%	25476	-1.90%	25256	-2.75%
Total Outpatient Costs, FY 90	23722245	23537242	-0.78%	23941641	0.92%	23756638	0.14%
Total Outpatient Costs, FY 91	23722245	23609687	-0.47%	24073246	1.48%	23960688	1.01%
Total Outpatient Costs, FY 92	23722245	23684427	-0.16%	24460249	3.11%	24422432	2.95%
Total Inpatient Costs, FY 90	72681799	71191649	-2.05%	70070356	-3.59%	68580205	-5.64%
Total Inpatient Costs, FY 91	72681799	71191649	-2.05%	70070356	-3.59%	68580205	-5.64%
Total Inpatient Costs, FY 92	72681799	71191649	-2.05%	70070356	-3.59%	68580205	-5.64%
Total Cost Per Visit, FY 90	55.35	54.92	-0.78%	55.86	0.92%	55.43	0.14%
Total Cost Per Visit, FY 91	55.35	55.09	-0.47%	56.17	1.48%	55.91	1.01%
Total Cost Per Visit, FY 92	55.35	55.26	-0.16%	57.07	3.11%	56.98	2.95%
Total Cost Per Admission, FY 90	3079.87	3079.87	0.00%	3079.87	0.00%	3079.87	0.00%
Total Cost Per Admission, FY 91	3079.87	3079.87	0.00%	3079.87	0.00%	3079.87	0.00%
Total Cost Per Admission, FY 92	3079.87	3079.87	0.00%	3079.87	0.00%	3079.87	0.00%
Total Cost, FY 90	96404044	94728891	-1.74%	94011996	-2.48%	92336843	-4.22%
Total Cost, FY 91	96404044	94801336	-1.66%	94143601	-2.34%	92540893	-4.01%
Total Cost, FY 92	96404044	94876076	-1.58%	94530685	-1.94%	93002637	-3.53%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% INCREASE

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	428588	428588	0.00%	428588	0.00%	428588	0.00%
Total Outpatient Visits, FY 91	428588	428588	0.00%	428588	0.00%	428588	0.00%
Total Outpatient Visits, FY 92	428588	428588	0.00%	428588	0.00%	428588	0.00%
Total Admissions, FY 90	25970	25750	-0.85%	25476	-1.90%	25256	-2.75%
Total Admissions, FY 91	25970	25750	-0.85%	25476	-1.90%	25256	-2.75%
Total Admissions, FY 92	25970	25750	-0.85%	25476	-1.90%	25256	-2.75%
Total Outpatient Costs, FY 90	25157253	24807534	-1.39%	25116426	-0.16%	24766707	-1.55%
Total Outpatient Costs, FY 91	26415115	25991938	-1.60%	26275658	-0.53%	25852481	-2.13%
Total Outpatient Costs, FY 92	27735871	27234235	-1.81%	27741670	0.02%	27240034	-1.79%
Total Inpatient Costs, FY 90	77069019	75426129	-2.13%	74189903	-3.74%	72547012	-5.87%
Total Inpatient Costs, FY 91	80922470	79197435	-2.13%	77899398	-3.74%	76174363	-5.87%
Total Inpatient Costs, FY 92	84968594	83157387	-2.13%	81794368	-3.74%	79983081	-5.87%
Total Cost Per Visit, FY 90	58.70	57.88	-1.39%	58.60	-0.16%	57.79	-1.55%
Total Cost Per Visit, FY 91	61.63	60.65	-1.60%	61.31	-0.53%	60.32	-2.13%
Total Cost Per Visit, FY 92	64.71	63.54	-1.81%	64.73	0.02%	63.56	-1.79%
Total Cost Per Admission, FY 90	3233.86	3233.86	0.00%	3233.86	0.00%	3233.86	0.00%
Total Cost Per Admission, FY 91	3395.56	3395.56	0.00%	3395.56	0.00%	3395.56	0.00%
Total Cost Per Admission, FY 92	3565.33	3565.33	0.00%	3565.33	0.00%	3565.33	0.00%
Total Cost, FY 90	102226272	100233662	-1.95%	99306328	-2.86%	97313719	-4.81%
Total Cost, FY 91	107337585	105189373	-2.00%	104175055	-2.95%	102026843	-4.95%
Total Cost, FY 92	112704465	110391542	-2.05%	109536038	-2.81%	107223115	-4.86%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% INCREASE AND 1% INCREASE IN CROC VISITS

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	429935	429935	0.00%	429935	0.00%	429935	0.00%
Total Outpatient Visits, FY 91	431295	431295	0.00%	431295	0.00%	431295	0.00%
Total Outpatient Visits, FY 92	432668	432668	0.00%	432668	0.00%	432668	0.00%
Total Admissions, FY 90	26050	25832	-0.83%	25555	-1.90%	25337	-2.73%
Total Admissions, FY 91	26130	25915	-0.82%	25619	-1.96%	25403	-2.78%
Total Admissions, FY 92	26211	25998	-0.81%	25683	-2.02%	25470	-2.83%
Total Outpatient Costs, FY 90	25232480	24871197	-1.43%	25173824	-0.23%	24812541	-1.66%
Total Outpatient Costs, FY 91	26573883	26125591	-1.69%	26392995	-0.68%	25944703	-2.37%
Total Outpatient Costs, FY 92	27907183	27444698	-1.94%	27934859	-0.19%	27392374	-2.13%
Total Inpatient Costs, FY 90	77286456	75641325	-2.13%	74386897	-3.75%	72741766	-5.88%
Total Inpatient Costs, FY 91	81381371	79651607	-2.13%	78283374	-3.81%	76553610	-5.93%
Total Inpatient Costs, FY 92	85694982	83876210	-2.12%	82385391	-3.86%	80566619	-5.98%
Total Cost Per Visit, FY 90	58.69	57.85	-1.43%	58.55	-0.23%	57.71	-1.66%
Total Cost Per Visit, FY 91	61.61	60.57	-1.69%	61.19	-0.68%	60.16	-2.37%
Total Cost Per Visit, FY 92	64.69	63.43	-1.94%	64.56	-0.19%	63.31	-2.13%
Total Cost Per Admission, FY 90	3233.86	3233.86	0.00%	3233.86	0.00%	3233.86	0.00%
Total Cost Per Admission, FY 91	3395.56	3395.56	0.00%	3395.56	0.00%	3395.56	0.00%
Total Cost Per Admission, FY 92	3565.33	3565.33	0.00%	3565.33	0.00%	3565.33	0.00%
Total Cost, FY 90	102518937	100512522	-1.96%	99560721	-2.89%	97554307	-4.84%
Total Cost, FY 91	107955254	105777198	-2.02%	104676369	-3.04%	102498313	-5.05%
Total Cost, FY 92	113682165	111320909	-2.08%	110320249	-2.96%	107958993	-5.03%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% INCREASE AND 1% INCREASE IN NON-CROC VISITS

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	432071	432071	0.00%	432071	0.00%	432071	0.00%
Total Outpatient Visits, FY 91	435045	435045	0.00%	435045	0.00%	435045	0.00%
Total Outpatient Visits, FY 92	438049	438049	0.00%	438049	0.00%	438049	0.00%
Total Admissions, FY 90	26167	25925	-0.92%	25652	-1.97%	25410	-2.89%
Total Admissions, FY 91	26349	26093	-0.97%	25822	-2.00%	25566	-2.97%
Total Admissions, FY 92	26533	26264	-1.01%	25993	-2.04%	25724	-3.05%
Total Outpatient Costs, FY 90	25371531	25021812	-1.38%	25330704	-0.16%	24980985	-1.54%
Total Outpatient Costs, FY 91	26827520	26404342	-1.58%	26688062	-0.52%	26264885	-2.10%
Total Outpatient Costs, FY 92	28367646	27866010	-1.77%	28373445	0.02%	27871809	-1.75%
Total Inpatient Costs, FY 90	77736339	75945462	-2.30%	74755668	-3.83%	72964791	-6.14%
Total Inpatient Costs, FY 91	82211079	80244311	-2.39%	79022852	-3.88%	77056085	-6.27%
Total Inpatient Costs, FY 92	86945125	84788448	-2.48%	83535424	-3.92%	81378748	-6.40%
Total Cost Per Visit, FY 90	58.72	57.91	-1.38%	58.63	-0.16%	57.82	-1.54%
Total Cost Per Visit, FY 91	61.67	60.69	-1.58%	61.35	-0.52%	60.37	-2.10%
Total Cost Per Visit, FY 92	64.76	63.61	-1.77%	64.77	0.02%	63.63	-1.75%
Total Cost Per Admission, FY 90	3233.86	3233.86	0.00%	3233.86	0.00%	3233.86	0.00%
Total Cost Per Admission, FY 91	3395.56	3395.56	0.00%	3395.56	0.00%	3395.56	0.00%
Total Cost Per Admission, FY 92	3565.33	3565.33	0.00%	3565.33	0.00%	3565.33	0.00%
Total Cost, FY 90	103107870	100967274	-2.08%	100086372	-2.93%	97945776	-5.01%
Total Cost, FY 91	109038598	106648654	-2.19%	105710914	-3.05%	103320969	-5.24%
Total Cost, FY 92	115312771	112654459	-2.31%	111908869	-2.95%	109250557	-5.26%

FY 90	All Input Variables Set to 0	All Cost Input Variables Set For a 5% Annual Increase	% Change	All Cost Input Variables Set For a 5% Annual Increase and a 1% Increase in CROC Visits	% Change	All Cost Input Variables Set For a 5% Annual Increase and a 1% Increase in Non-CROC Visits	% Change
No CROCS	96404044.32	102226271.85	6.04%	102518936.58	6.34%	103107870.18	6.95%
With NAVCARE Only	94728891.28	100233662.17	5.81%	100512522.23	6.11%	100967273.76	6.59%
With PRIMUS Only	94011996.30	99306328.39	5.63%	99560721.11	5.90%	100086372.38	6.46%
With Both CROCS	92336843.26	97313718.71	5.39%	97554306.76	5.65%	97945775.96	6.07%
FY 91							
No CROCS	96404044.32	107337585.44	11.34%	107955254.36	11.98%	109038598.35	13.11%
With NAVCARE Only	94801336.29	105189373.02	10.96%	105777198.22	11.58%	106648653.52	12.50%
With PRIMUS Only	94143601.17	104175055.49	10.66%	104676368.83	11.19%	105710914.30	12.29%
With Both CROCS	92540893.14	102026843.07	10.25%	102498312.68	10.76%	103320969.47	11.65%
FY 92							
No CROCS	96404044.32	112704464.71	16.91%	113682165.48	17.92%	115312770.68	19.61%
With NAVCARE Only	94876076.26	110391542.13	16.35%	111320908.90	17.33%	112654458.77	18.74%
With PRIMUS Only	94530604.96	109536037.62	15.87%	110320249.44	16.70%	111908869.15	18.38%
With Both CROCS	93002636.90	107223115.04	15.29%	107958992.87	16.08%	109250557.24	17.47%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% INCREASE AND 1% DECREASE IN CROC VISITS

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	427241	427241	0.00%	427241	0.00%	427241	0.00%
Total Outpatient Visits, FY 91	425908	425908	0.00%	425908	0.00%	425908	0.00%
Total Outpatient Visits, FY 92	424588	424588	0.00%	424588	0.00%	424588	0.00%
Total Admissions, FY 90	25890	25668	-0.86%	25396	-1.91%	25175	-2.76%
Total Admissions, FY 91	25811	25587	-0.87%	25334	-1.85%	25110	-2.72%
Total Admissions, FY 92	25733	25507	-0.88%	25272	-1.79%	25046	-2.67%
Total Outpatient Costs, FY 90	25082025	24743870	-1.35%	25059028	-0.09%	24720873	-1.44%
Total Outpatient Costs, FY 91	26257927	25859615	-1.52%	26159488	-0.37%	25761176	-1.89%
Total Outpatient Costs, FY 92	27489535	27027940	-1.68%	27552307	0.23%	27090711	-1.45%
Total Inpatient Costs, FY 90	76851582	75210932	-2.13%	73992908	-3.72%	72352258	-5.85%
Total Inpatient Costs, FY 91	80468136	78747782	-2.14%	77518929	-3.67%	75798576	-5.80%
Total Inpatient Costs, FY 92	84256589	82452638	-2.14%	81214393	-3.61%	79410443	-5.75%
Total Cost Per Visit, FY 90	58.71	57.92	-1.35%	58.65	-0.09%	57.86	-1.44%
Total Cost Per Visit, FY 91	61.65	60.72	-1.52%	61.42	-0.37%	60.49	-1.89%
Total Cost Per Visit, FY 92	64.74	63.66	-1.68%	64.89	0.23%	63.80	-1.45%
Total Cost Per Admission, FY 90	3233.86	3233.86	0.00%	3233.86	0.00%	3233.86	0.00%
Total Cost Per Admission, FY 91	3395.56	3395.56	0.00%	3395.56	0.00%	3395.56	0.00%
Total Cost Per Admission, FY 92	3565.33	3565.33	0.00%	3565.33	0.00%	3565.33	0.00%
Total Cost, FY 90	101933607	99954802	-1.94%	99051936	-2.83%	97073131	-4.77%
Total Cost, FY 91	106726062	104607397	-1.99%	103678417	-2.86%	101559752	-4.84%
Total Cost, FY 92	111746124	109480578	-2.03%	108766700	-2.67%	106501154	-4.69%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% INCREASE AND 1% DECREASE IN NON-CROC VISITS

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	425116	425116	0.00%	425116	0.00%	425116	0.00%
Total Outpatient Visits, FY 91	422212	422212	0.00%	422212	0.00%	422212	0.00%
Total Outpatient Visits, FY 92	419336	419336	0.00%	419336	0.00%	419336	0.00%
Total Admissions, FY 90	25773	25576	-0.77%	25299	-1.84%	25102	-2.61%
Total Admissions, FY 91	25595	25411	-0.72%	25133	-1.80%	24949	-2.52%
Total Admissions, FY 92	25419	25247	-0.67%	24969	-1.77%	24798	-2.44%
Total Outpatient Costs, FY 90	24943725	24594006	-1.40%	24902898	-0.16%	24553179	-1.57%
Total Outpatient Costs, FY 91	26007992	25584814	-1.63%	25868534	-0.54%	25445357	-2.16%
Total Outpatient Costs, FY 92	27118246	26616610	-1.85%	27124045	0.02%	26622409	-1.83%
Total Inpatient Costs, FY 90	76403958	74907723	-1.96%	73625468	-3.64%	72129233	-5.59%
Total Inpatient Costs, FY 91	79650223	78162429	-1.87%	76789288	-3.59%	75301414	-5.46%
Total Inpatient Costs, FY 92	83036131	81560488	-1.78%	80090693	-3.55%	78615050	-5.32%
Total Cost Per Visit, FY 90	58.68	57.85	-1.40%	58.58	-0.16%	57.76	-1.57%
Total Cost Per Visit, FY 91	61.60	60.60	-1.63%	61.27	-0.54%	60.27	-2.16%
Total Cost Per Visit, FY 92	64.67	63.47	-1.85%	64.68	0.02%	63.49	-1.83%
Total Cost Per Admission, FY 90	3233.86	3233.86	0.00%	3233.86	0.00%	3233.86	0.00%
Total Cost Per Admission, FY 91	3395.56	3395.56	0.00%	3395.56	0.00%	3395.56	0.00%
Total Cost Per Admission, FY 92	3565.33	3565.33	0.00%	3565.33	0.00%	3565.33	0.00%
Total Cost, FY 90	101347683	99501729	-1.82%	98528367	-2.78%	96682413	-4.60%
Total Cost, FY 91	105658215	103747243	-1.81%	102657742	-2.84%	100746771	-4.65%
Total Cost, FY 92	110154377	108177099	-1.80%	107214737	-2.67%	105237459	-4.46%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% DECREASE AND 1% INCREASE IN CROC VISITS

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	429935	429935	0.00%	429935	0.00%	429935	0.00%
Total Outpatient Visits, FY 91	431295	431295	0.00%	431295	0.00%	431295	0.00%
Total Outpatient Visits, FY 92	432668	432668	0.00%	432668	0.00%	432668	0.00%
Total Admissions, FY 90	26050	25832	-0.83%	25555	-1.90%	25337	-2.73%
Total Admissions, FY 91	26130	25915	-0.82%	25619	-1.96%	25403	-2.78%
Total Admissions, FY 92	26211	25998	-0.81%	25683	-2.02%	25470	-2.83%
Total Outpatient Costs, FY 90	22377738	22346579	-0.14%	22840594	2.07%	22809436	1.93%
Total Outpatient Costs, FY 91	21322941	21489075	0.78%	22112171	3.70%	22278306	4.48%
Total Outpatient Costs, FY 92	20318289	20681027	1.79%	21694938	6.78%	22057677	8.56%
Total Inpatient Costs, FY 90	68559138	67213666	-1.96%	66186296	-3.46%	64840824	-5.42%
Total Inpatient Costs, FY 91	65316204	64037418	-1.96%	63020622	-3.51%	61741836	-5.47%
Total Inpatient Costs, FY 92	62227923	61012514	-1.95%	60007414	-3.57%	58792005	-5.52%
Total Cost Per Visit, FY 90	52.05	51.98	-0.14%	53.13	2.07%	53.05	1.93%
Total Cost Per Visit, FY 91	49.44	49.82	0.78%	51.27	3.70%	51.65	4.48%
Total Cost Per Visit, FY 92	46.96	47.80	1.79%	50.14	6.78%	50.98	8.56%
Total Cost Per Admission, FY 90	2925.88	2925.88	0.00%	2925.88	0.00%	2925.88	0.00%
Total Cost Per Admission, FY 91	2779.58	2779.58	0.00%	2779.58	0.00%	2779.58	0.00%
Total Cost Per Admission, FY 92	2640.60	2640.60	0.00%	2640.60	0.00%	2640.60	0.00%
Total Cost, FY 90	90936876	89568245	-1.51%	89026890	-2.10%	87650260	-3.61%
Total Cost, FY 91	86639145	85526494	-1.28%	85132793	-1.74%	84020142	-3.02%
Total Cost, FY 92	82546211	81693541	-1.03%	81702352	-1.02%	80849681	-2.06%

ALL COST INPUT VARIABLES SET FOR ANNUAL 5% DECREASE AND 1% INCREASE IN NON-CROC VISITS

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	% Change	Scenario #3 W/PRIMUS	% Change	Scenario #4 BOTH CROCS	% Change
Total Outpatient Visits, FY 90	432071	432071	0.00%	432071	0.00%	432071	0.00%
Total Outpatient Visits, FY 91	435045	435045	0.00%	435045	0.00%	435045	0.00%
Total Outpatient Visits, FY 92	438049	438049	0.00%	438049	0.00%	438049	0.00%
Total Admissions, FY 90	26167	25925	-0.92%	25652	-1.97%	25410	-2.89%
Total Admissions, FY 91	26349	26093	-0.97%	25822	-2.00%	25566	-2.97%
Total Admissions, FY 92	26533	26264	-1.01%	25993	-2.04%	25724	-3.05%
Total Outpatient Costs, FY 90	22498388	22475445	-0.10%	22973831	2.11%	22950968	2.01%
Total Outpatient Costs, FY 91	21523671	21702813	0.83%	22335216	3.77%	22514359	4.60%
Total Outpatient Costs, FY 92	20591679	20968644	1.83%	21984426	6.76%	22361391	8.59%
Total Inpatient Costs, FY 90	68958511	67483287	-2.13%	66509832	-3.54%	65042608	-5.67%
Total Inpatient Costs, FY 91	65974825	64515838	-2.21%	63612146	-3.58%	62153159	-5.79%
Total Inpatient Costs, FY 92	63128813	61680289	-2.29%	60842018	-3.62%	59393494	-5.92%
Total Cost Per Visit, FY 90	52.07	52.02	-0.10%	53.17	2.11%	53.12	2.01%
Total Cost Per Visit, FY 91	49.47	49.89	0.83%	51.34	3.77%	51.75	4.60%
Total Cost Per Visit, FY 92	47.01	47.87	1.83%	50.19	6.76%	51.05	8.59%
Total Cost Per Admission, FY 90	2925.88	2925.88	0.00%	2925.88	0.00%	2925.88	0.00%
Total Cost Per Admission, FY 91	2779.58	2779.58	0.00%	2779.58	0.00%	2779.58	0.00%
Total Cost Per Admission, FY 92	2640.60	2640.60	0.00%	2640.60	0.00%	2640.60	0.00%
Total Cost, FY 90	91448819	89958732	-1.63%	89483663	-2.15%	87993576	-3.78%
Total Cost, FY 91	87498495	86218651	-1.46%	85947363	-1.77%	84667518	-3.24%
Total Cost, FY 92	83720492	82648933	-1.28%	82826444	-1.07%	81754885	-2.35%

FY 90	All Input Variables Set to 0	All Cost Input Variables Set For a 5% Annual Increase and a 1% Decrease in CROC Visits	Percent Change	All Cost Input Variables Set For a 5% Annual Increase and a 1% Decrease in Non-CROC Visits	Percent Change	All Cost Input Variables Set For a 5% Annual Decrease and a 1% Increase in CROC Visits	Percent Change	All Cost Input Variables Set For a 5% Annual Decrease and a 1% Increase in Non-CROC Visit	Percent Change
No CROCS	96404044.32	101933607.11	5.74%	101347683.42	5.13%	90936875.65	-5.67%	91448818.97	-5.14%
With NAVCARE Only	94728891.28	99954882.10	5.52%	99501729.16	5.04%	89568245.34	-5.46%	89958732.08	-5.04%
With PRIMUS Only	94011996.30	99051935.67	5.36%	98528366.89	4.80%	89026890.04	-5.30%	89483662.93	-4.82%
With Both CROCS	92336843.26	97073130.66	5.13%	96682412.63	4.71%	87650259.73	-5.08%	87993576.04	-4.70%
FY 91									
No CROCS	96404044.32	106726062.48	10.71%	105658214.89	9.60%	86639144.82	-10.13%	87498495.33	-9.24%
With NAVCARE Only	94801336.29	104607396.84	10.34%	103747243.26	9.44%	85526493.88	-9.78%	86218651.05	-9.05%
With PRIMUS Only	94143601.17	103678417.24	10.13%	102657742.35	9.04%	85132792.85	-9.57%	85947362.54	-8.71%
With Both CROCS	92540893.14	101559751.60	9.75%	100746770.72	8.87%	84020141.92	-9.21%	84667518.27	-8.51%
FY 92									
No CROCS	96404044.32	111746123.72	15.91%	110154377.25	14.26%	82546211.45	-14.37%	83720432.11	-13.16%
With NAVCARE Only	94876076.26	109480578.06	15.39%	108177098.57	14.02%	81693540.98	-13.89%	82648933.06	-12.89%
With PRIMUS Only	94530604.96	108766700.00	15.06%	107214737.34	13.42%	81702351.83	-13.57%	82826443.94	-12.38%
With Both CROCS	93002636.90	106501154.34	14.51%	105237458.66	13.16%	80849681.37	-13.07%	81754884.89	-12.09%

APPENDIX H

FORMULAS USED WITH THE BASIC WHAT-IF MODEL

```
B6: 'NAVCARE Visits
G6: +F6*(1+$NAVCAREVIS)
H6: +G6*(1+$NAVCAREVIS)
I6: +H6*(1+$NAVCAREVIS)
B7: 'NAVCARE Costs:
B8: '  /Full
E8: @IF((E$6+$C114))$D114,(((E$6+$C114)-$D114)*E127)+($D114*E118),(E$6+$C114*E114))
F8: ((@IF((F$6+$C127))$D127,(((F$6+$C127)-$D127)*F127)+($D127*F114),(F$6+$C127*F114))))
G8: ((@IF((G$6+$C127))$D127,(((G$6+$C127)-$D127)*G127)+($D127*G114),(G$6+$C127*G114))))
H8: ((@IF((H$6+$C127))$D127,(((H$6+$C127)-$D127)*H127)+($D127*H114),(H$6+$C127*H114))))
I8: ((@IF((I$6+$C127))$D127,(((I$6+$C127)-$D127)*I127)+($D127*I114),(I$6+$C127*I114))))
B9: '  /Limited
E9: @IF((E$6+$C115))$D115,(((E$6+$C115)-$D115)*E128)+($D115*E119),(E$6+$C115*E115))
F9: ((@IF((F$6+$C128))$D128,(((F$6+$C128)-$D128)*F128)+($D128*F115),(F$6+$C128*F115))))
G9: ((@IF((G$6+$C128))$D128,(((G$6+$C128)-$D128)*G128)+($D128*G115),(G$6+$C128*G115))))
H9: ((@IF((H$6+$C128))$D128,(((H$6+$C128)-$D128)*H128)+($D128*H115),(H$6+$C128*H115))))
I9: ((@IF((I$6+$C128))$D128,(((I$6+$C128)-$D128)*I128)+($D128*I115),(I$6+$C128*I115))))
B10: '  /Prescriptions
E10: @IF((E$6+$C116))$D116,(((E$6+$C116)-$D116)*E129)+($D116*E121),(E$6+$C116*E116))
F10: ((@IF((F$6+$C129))$D129,(((F$6+$C129)-$D129)*F129)+($D129*F116),(F$6+$C129*F116))))
G10: ((@IF((G$6+$C129))$D129,(((G$6+$C129)-$D129)*G129)+($D129*G116),(G$6+$C129*G116))))
H10: ((@IF((H$6+$C129))$D129,(((H$6+$C129)-$D129)*H129)+($D129*H116),(H$6+$C129*H116))))
I10: ((@IF((I$6+$C129))$D129,(((I$6+$C129)-$D129)*I129)+($D129*I116),(I$6+$C129*I116))))
B11: '  /Immunizations
E11: @IF((E$6+$C117))$D117,(((E$6+$C117)-$D117)*E130)+($D117*E122),(E$6+$C117*E117))
F11: ((@IF((F$6+$C130))$D130,(((F$6+$C130)-$D130)*F130)+($D130*F117),(F$6+$C130*F117))))
G11: ((@IF((G$6+$C130))$D130,(((G$6+$C130)-$D130)*G130)+($D130*G117),(G$6+$C130*G117))))
H11: ((@IF((H$6+$C130))$D130,(((H$6+$C130)-$D130)*H130)+($D130*H117),(H$6+$C130*H117))))
I11: ((@IF((I$6+$C130))$D130,(((I$6+$C130)-$D130)*I130)+($D130*I117),(I$6+$C130*I117))))
B12: '  /Mammography
E12: @IF((E$6+$C118))$D118,(((E$6+$C118)-$D118)*E131)+($D118*E123),(E$6+$C118*E118))
F12: ((@IF((F$6+$C131))$D131,(((F$6+$C131)-$D131)*F131)+($D131*F118),(F$6+$C131*F118))))
G12: ((@IF((G$6+$C131))$D131,(((G$6+$C131)-$D131)*G131)+($D131*G118),(G$6+$C131*G118))))
H12: ((@IF((H$6+$C131))$D131,(((H$6+$C131)-$D131)*H131)+($D131*H118),(H$6+$C131*H118))))
I12: ((@IF((I$6+$C131))$D131,(((I$6+$C131)-$D131)*I131)+($D131*I118),(I$6+$C131*I118))))
B13: '  /Emergency xport
E13: @IF((E$6+$C119))$D119,(((E$6+$C119)-$D119)*E132)+($D119*E124),(E$6+$C119*E119))
F13: ((@IF((F$6+$C132))$D132,(((F$6+$C132)-$D132)*F132)+($D132*F119),(F$6+$C132*F119))))
G13: ((@IF((G$6+$C132))$D132,(((G$6+$C132)-$D132)*G132)+($D132*G119),(G$6+$C132*G119))))
H13: ((@IF((H$6+$C132))$D132,(((H$6+$C132)-$D132)*H132)+($D132*H119),(H$6+$C132*H119))))
I13: ((@IF((I$6+$C132))$D132,(((I$6+$C132)-$D132)*I132)+($D132*I119),(I$6+$C132*I119))))
B14: '  /Less PRS deductions
E14: @IF((E$6+$C121))$D121,(((E$6+$C121)-$D121)*E133)+($D121*E125),(E$6+$C121*E121))
F14: -16086.63-2866.01-1966.22
B15: '      /Total
E15: @SUM(E8..E14)
F15: @SUM(F8..F14)
```

```
G15: @SUM(G8..G14)
H15: @SUM(H8..H14)
I15: @SUM(I8..I14)
B16: 'NAVCARE Cost/Visit
E16: +E15/E6
F16: +F15/F6
G16: +G15/G6
H16: +H15/H6
I16: +I15/I6
B17: 'NAVCARE Site Prep Amort
E17: (650814/51)*3
F17: (650814/51)*12
G17: (650814/51)*12
H17: (650814/51)*12
I17: (650814/51)*12
B18: 'Final NAVCARE cost/visit
E18: (E17+E15)/E6
F18: (F17+F15)/F6
G18: (G17+G15)/G6
H18: (H17+H15)/H6
I18: (I17+I15)/I6
B19: 'PRIMUS Visits (Presidio)
E19: +I209
F19: +I226
G19: +F19*(1+$PRIMPOMVIS)
H19: +G19*(1+$PRIMPOMVIS)
I19: +H19*(1+$PRIMPOMVIS)
B20: 'PRIMUS Costs:
B21: '  /Full Visit
E21: @IF((E$19+$C140)$D140),(((E$19+$C140)-$D140)*H140)+($D140*G140),(E$19+$C140*G140))
F21: @IF((F$19+$E140)$F140),(((F$19+$E140)-$F140)*J140)+($F140*I140),(F$19+$E140*I140))
G21: @IF((G$19+$E140)$F140),(((G$19+$E140)-$F140)*L140)+($F140*K140),(G$19+$E140*K140))
H21: @IF((H$19+$E140)$F140),(((H$19+$E140)-$F140)*N140)+($F140*M140),(H$19+$E140*M140))
I21: @IF((I$19+$E140)$F140),(((I$19+$E140)-$F140)*P140)+($F140*O140),(I$19+$E140*O140))
B22: '  /Short Visit
E22: @IF((E$19+$C141)$D141),(((E$19+$C141)-$D141)*H141)+($D141*G141),(E$19+$C141*G141))
F22: @IF((F$19+$E141)$F141),(((F$19+$E141)-$F141)*J141)+($F141*I141),(F$19+$E141*I141))
G22: @IF((G$19+$E141)$F141),(((G$19+$E141)-$F141)*L141)+($F141*K141),(G$19+$E141*K141))
H22: @IF((H$19+$E141)$F141),(((H$19+$E141)-$F141)*N141)+($F141*M141),(H$19+$E141*M141))
I22: @IF((I$19+$E141)$F141),(((I$19+$E141)-$F141)*P141)+($F141*O141),(I$19+$E141*O141))
B23: '  /Dispensing Fee
E23: @IF((E$19+$C142)$D142),(((E$19+$C142)-$D142)*H142)+($D142*G142),(E$19+$C142*G142))
F23: @IF((F$19+$E142)$F142),(((F$19+$E142)-$F142)*J142)+($F142*I142),(F$19+$E142*I142))
G23: @IF((G$19+$E142)$F142),(((G$19+$E142)-$F142)*L142)+($F142*K142),(G$19+$E142*K142))
H23: @IF((H$19+$E142)$F142),(((H$19+$E142)-$F142)*N142)+($F142*M142),(H$19+$E142*M142))
I23: @IF((I$19+$E142)$F142),(((I$19+$E142)-$F142)*P142)+($F142*O142),(I$19+$E142*O142))
B24: '  /Immunizations
E24: @IF((E$19+$C143)$D143),(((E$19+$C143)-$D143)*H143)+($D143*G143),(E$19+$C143*G143))
F24: @IF((F$19+$E143)$F143),(((F$19+$E143)-$F143)*J143)+($F143*I143),(F$19+$E143*I143))
G24: @IF((G$19+$E143)$F143),(((G$19+$E143)-$F143)*L143)+($F143*K143),(G$19+$E143*K143))
H24: @IF((H$19+$E143)$F143),(((H$19+$E143)-$F143)*N143)+($F143*M143),(H$19+$E143*M143))
I24: @IF((I$19+$E143)$F143),(((I$19+$E143)-$F143)*P143)+($F143*O143),(I$19+$E143*O143))
```

```
B25: '  /Optometry
E25: @IF((E$19+$C144)$D144),(((E$19+$C144)-$D144)*H144)+($D144*G144),(E$19+$C144*G144))
F25: @IF((F$19+$E144)$F144),(((F$19+$E144)-$F144)*J144)+($F144*I144),(F$19+$E144*I144))
G25: @IF((G$19+$E144)$F144),(((G$19+$E144)-$F144)*L144)+($F144*K144),(G$19+$E144*K144))
H25: @IF((H$19+$E144)$F144),(((H$19+$E144)-$F144)*N144)+($F144*M144),(H$19+$E144*M144))
I25: @IF((I$19+$E144)$F144),(((I$19+$E144)-$F144)*P144)+($F144*O144),(I$19+$E144*O144))
B26: '      /Total
E26: @SUM(E21..E25)
F26: @SUM(F21..F25)
G26: @SUM(G21..G25)
H26: @SUM(H21..H25)
I26: @SUM(I21..I25)
B27: 'PRIMUS Cost/Visit
E27: +E26/E19
F27: +F26/F19
G27: +G26/G19
H27: +H26/H19
I27: +I26/I19
B28: 'PRIMUS Site Prep Amort
E28: (207225/51)*3
F28: (207225/51)*12
G28: (207225/51)*12
H28: (207225/51)*12
I28: (207225/51)*12
B29: 'Final PRIMUS cost/visit
E29: (E28+E26)/E19
F29: (F28+F26)/F19
G29: (G28+G26)/G19
H29: (H28+H26)/H19
I29: (I28+I26)/I19
B30: 'PRIMUS Visits (Salinas)
E30: +H238
F30: +H255
G30: +F30*(1+$PRIMSALVIS)
H30: +G30*(1+$PRIMSALVIS)
I30: +H30*(1+$PRIMSALVIS)
B31: 'PRIMUS Costs:
B32: '  /Full Visit
E32: @IF((E$30+$C152)$D152),(((E$30+$C152)-$D152)*H152)+($D152*G152),(E$30+$C152*G152))
F32: @IF((F$30+$E152)$F152),(((F$30+$E152)-$F152)*J152)+($F152*I152),(F$30+$E152*I152))
G32: @IF((G$30+$E152)$F152),(((G$30+$E152)-$F152)*L152)+($F152*K152),(G$30+$E152*K152))
H32: @IF((H$30+$E152)$F152),(((H$30+$E152)-$F152)*N152)+($F152*M152),(H$30+$E152*M152))
I32: @IF((I$30+$E152)$F152),(((I$30+$E152)-$F152)*P152)+($F152*O152),(I$30+$E152*O152))
B33: '  /Short Visit
E33: @IF((E$30+$C153)$D153),(((E$30+$C153)-$D153)*H153)+($D153*G153),(E$30+$C153*G153))
F33: @IF((F$30+$E153)$F153),(((F$30+$E153)-$F153)*J153)+($F153*I153),(F$30+$E153*I153))
G33: @IF((G$30+$E153)$F153),(((G$30+$E153)-$F153)*L153)+($F153*K153),(G$30+$E153*K153))
H33: @IF((H$30+$E153)$F153),(((H$30+$E153)-$F153)*N153)+($F153*M153),(H$30+$E153*M153))
I33: @IF((I$30+$E153)$F153),(((I$30+$E153)-$F153)*P153)+($F153*O153),(I$30+$E153*O153))
B34: '  /Dispensing Fee
E34: @IF((E$30+$C154)$D154),(((E$30+$C154)-$D154)*H154)+($D154*G154),(E$30+$C154*G154))
F34: @IF((F$30+$E154)$F154),(((F$30+$E154)-$F154)*J154)+($F154*I154),(F$30+$E154*I154))
```

```
G34: @IF((G$30+$E154)$F154),(((G$30+$E154)-$F154)*L154)+($F154*K154),(G$30+$E154*K154))
H34: @IF((H$30+$E154)$F154),(((H$30+$E154)-$F154)*N154)+($F154*M154),(H$30+$E154*M154))
I34: @IF((I$30+$E154)$F154),(((I$30+$E154)-$F154)*P154)+($F154*O154),(I$30+$E154*O154))
B35: '  /Immunizations
E35: @IF((E$30+$C155)$D155),(((E$30+$C155)-$D155)*H155)+($D155*G155),(E$30+$C155*G155))
F35: @IF((F$30+$E155)$F155),(((F$30+$E155)-$F155)*J155)+($F155*I155),(F$30+$E155*I155))
G35: @IF((G$30+$E155)$F155),(((G$30+$E155)-$F155)*L155)+($F155*K155),(G$30+$E155*K155))
H35: @IF((H$30+$E155)$F155),(((H$30+$E155)-$F155)*N155)+($F155*M155),(H$30+$E155*M155))
I35: @IF((I$30+$E155)$F155),(((I$30+$E155)-$F155)*P155)+($F155*O155),(I$30+$E155*O155))
B36: '      /Total
E36: @SUM(E32..E35)
F36: @SUM(F32..F35)
G36: @SUM(G32..G35)
H36: @SUM(H32..H35)
I36: @SUM(I32..I35)
B37: 'PRIMUS Cost/Visit
E37: +E36/E30
F37: +F36/F30
G37: +G36/G30
H37: +H36/H30
I37: +I36/I30
B38: 'PRIMUS Site Prep Amort
E38: (268530/51)*3
F38: (268530/51)*12
G38: (268530/51)*12
H38: (268530/51)*12
I38: (268530/51)*12
B39: 'Final PRIMUS cost/visit
E39: (E36+E38)/E30
F39: (F36+F38)/F30
G39: (G36+G38)/G30
H39: (H36+H38)/H30
I39: (I36+I38)/I30
B40: 'NAVHOSP OPV
C40: @IF($NAVCAREEXIST=1,N$6,(N$6+(C$6*(1-$P$10))))
D40: @IF($NAVCAREEXIST=1,O$6,(O$6+(D$6*(1-$P$10))))
E40: @IF($NAVCAREEXIST=1,P$6,(P$6+(E$6*(1-$P$10))))
F40: @IF($NAVCAREEXIST=1,Q$6,(Q$6+(F$6*(1-$P$10))))
G40: @IF($NAVCAREEXIST=1,P$40,(P$40)+(G$6*(1-$P$10)))
H40: @IF($NAVCAREEXIST=1,Q$40,(Q$40)+(H$6*(1-$P$10)))
I40: @IF($NAVCAREEXIST=1,R$40,(R$40)+(I$6*(1-$P$10)))
B41: 'NAVHOSP OPV Costs
C41: @IF($NAVCAREEXIST=1,N$7,(N$7/N$6)*C$40)
D41: @IF($NAVCAREEXIST=1,O$7,(O$7/O$6)*D$40)
E41: @IF($NAVCAREEXIST=1,P$7,(P$7/P$6)*E$40)
F41: @IF($NAVCAREEXIST=1,Q$7,(Q$7/Q$6)*F$40)
G41: (G$40*F$42)*(1+$NAVHOSPVISCOST)
H41: (H$40*NAVHOSPC/V90)*(1+$NAVHOSPVISCOST)
I41: (I$40*NAVHOSPC/V91)*(1+$NAVHOSPVISCOST)
B42: 'NAVHOSP Cost/OPV
C42: +C41/C40
D42: +D41/D40
```

```
E42: +E41/E40
F42: +F41/F40
G42: +G41/G40
H42: +H41/H40
I42: +I41/I40
B43: 'HAYS OPV
C43: @IF($PRIMUSEXIST=1,N$14,(N$14+((C$19+C$30)*(1-$P$18))))
D43: @IF($PRIMUSEXIST=1,O$14,(O$14+((D$19+D$30)*(1-$P$18))))
E43: @IF($PRIMUSEXIST=1,P$14,(P$14+((E$19+E$30)*(1-$P$18))))
F43: @IF($PRIMUSEXIST=1,Q$14,(Q$14+((F$19+F$30)*(1-$P$18))))
G43: @IF($PRIMUSEXIST=1,P$42,P$42+((G$19+G$30)*(1-$P$21)))
H43: @IF($PRIMUSEXIST=1,Q$42,Q$42+((H$19+H$30)*(1-$P$21)))
I43: @IF($PRIMUSEXIST=1,R$42,R$42+((I$19+I$30)*(1-$P$21)))
B44: 'Hays OPV Costs
C44: @IF($PRIMUSEXIST=1,N$15,(N$15/N$14)*(N$14+((C$19+C$30)*(1-$P$18))))
D44: @IF($PRIMUSEXIST=1,O$15,(O$15/O$14)*D$43)
E44: @IF($PRIMUSEXIST=1,P$15,(P$15/P$14)*E$43)
F44: @IF($PRIMUSEXIST=1,Q$15,(Q$15/Q$14)*F$43)
G44: (G$43*F$45)*(1+$HAYSVISCOST)
H44: (H$43*HAYSC/V90)*(1+$HAYSVISCOST)
I44: (I$43*HAYSC/V91)*(1+$HAYSVISCOST)
B45: 'Hays Cost/OPV
C45: +C44/C43
D45: +D44/D43
E45: +E44/E43
F45: +F44/F43
G45: +G44/G43
H45: +H44/H43
I45: +I44/I43
B46: 'CHAMPUS OPV       (Oak)
C46: @IF($NAVCAREEXIST=1,N$11,N$11+(C$6*$P$10))
D46: @IF($NAVCAREEXIST=1,O$11,O$11+(D$6*$P$10))
E46: @IF($NAVCAREEXIST=1,P$11,P$11+(E$6*$P$10))
F46: @IF($NAVCAREEXIST=1,(O$41),(O$41)+(F$6*$P$10))
G46: @IF($NAVCAREEXIST=1,(P$41),(P$41)+(G$6*$P$10))
H46: @IF($NAVCAREEXIST=1,(Q$41),(Q$41)+(H$6*$P$10))
I46: @IF($NAVCAREEXIST=1,(R$41),(R$41)+(I$6*$P$10))
B47: 'CHAMPUS OPV Costs (Oak)
C47: @IF($NAVCAREEXIST=1,N$12,((N$12/N$11)*C$46))
D47: @IF($NAVCAREEXIST=1,O$12,((O$12/O$11)*D$46))
E47: @IF($NAVCAREEXIST=1,P$12,((P$12/P$11)*E$46))
F47: (F$46*E$48)*(1+$CHAMPVISCOSTOAK)
G47: (G$46*F$48)*(1+$CHAMPVISCOSTOAK)
H47: (H$46*G$48)*(1+$CHAMPVISCOSTOAK)
I47: (I$46*H$48)*(1+$CHAMPVISCOSTOAK)
B48: 'CHAMPUS Cost/OPV  (Oak)
C48: +C47/C46
D48: +D47/D46
E48: +E47/E46
F48: +F47/F46
G48: +G47/G46
H48: +H47/H46
```

```
I48: +I47/I46
B49: 'CHAMPUS OPV        (Ft Ord)
C49: @IF($PRIMUSEXIST=1,N$22,N$22+((C$19+C$30)*$P$18))
D49: @IF($PRIMUSEXIST=1,O$22,O$22+((D$19+D$30)*$P$18))
E49: @IF($PRIMUSEXIST=1,P$22,P$22+((E$19+E$30)*$P$18))
F49: @IF($PRIMUSEXIST=1,(O$43),(O$43)+((F$19+F$30)*$P$18))
G49: @IF($PRIMUSEXIST=1,(P$43),(P$43)+((G$19+G$30)*$P$18))
H49: @IF($PRIMUSEXIST=1,(Q$43),(Q$43)+((H$19+H$30)*$P$18))
I49: @IF($PRIMUSEXIST=1,(R$43),(R$43)+((I$19+I$30)*$P$18))
B50: 'CHAMPUS OPV Costs (Ft Ord)
C50: @IF($PRIMUSEXIST=1,N$23,((N$23/N$22)*C$49))
D50: @IF($PRIMUSEXIST=1,O$23,((O$23/O$22)*D$49))
E50: @IF($PRIMUSEXIST=1,P$23,((P$23/P$22)*E$49))
F50: (F$49*E$51)*(1+$CHAMPVISCOSTORD)
G50: (G$49*F$51)*(1+$CHAMPVISCOSTORD)
H50: (H$49*G$51)*(1+$CHAMPVISCOSTORD)
I50: (I$49*H$51)*(1+$CHAMPVISCOSTORD)
B51: 'CHAMPUS Cost/OPV  (Ft Ord)
C51: +C50/C49
D51: +D50/D49
E51: +E50/E49
F51: +F50/F49
G51: +G50/G49
H51: +H50/H49
I51: +I50/I49
B53: 'TOTAL OPV        (Oak)
C53: @IF($NAVCAREEXIST=1,C$46+C$40+C$6,C$46+C$40)
D53: @IF($NAVCAREEXIST=1,D$46+D$40+D$6,D$46+D$40)
E53: @IF($NAVCAREEXIST=1,E$46+E$40+E$6,E$46+E$40)
F53: @IF($NAVCAREEXIST=1,F$46+F$40+F$6,F$46+F$40)
G53: @IF($NAVCAREEXIST=1,G$46+G$40+G$6,G$46+G$40)
H53: @IF($NAVCAREEXIST=1,H$46+H$40+H$6,H$46+H$40)
I53: @IF($NAVCAREEXIST=1,I$46+I$40+I$6,I$46+I$40)
B54: 'TOTAL OPV COSTS (Oak)
C54: @IF($NAVCAREEXIST=1,C$15+C$17+C$41+C$47,C$47+C$41)
D54: @IF($NAVCAREEXIST=1,D$15+D$17+D$41+D$47,D$47+D$41)
E54: @IF($NAVCAREEXIST=1,E$15+E$17+E$41+E$47,E$47+E$41)
F54: @IF($NAVCAREEXIST=1,F$15+F$17+F$41+F$47,F$47+F$41)
G54: @IF($NAVCAREEXIST=1,G$15+G$17+G$41+G$47,G$47+G$41)
H54: @IF($NAVCAREEXIST=1,H$15+H$17+H$41+H$47,H$47+H$41)
I54: @IF($NAVCAREEXIST=1,I$15+I$17+I$41+I$47,I$47+I$41)
B55: 'TOTAL COST/OPV  (Oak)
C55: +C54/C53
D55: +D54/D53
E55: +E54/E53
F55: +F54/F53
G55: +G54/G53
H55: +H54/H53
I55: +I54/I53
B56: 'TOTAL OPV        (Ft Ord)
C56: @IF($PRIMUSEXIST=1,C$19+C$30+C$43+C$49,C$49+C$43)
D56: @IF($PRIMUSEXIST=1,D$19+D$30+D$43+D$49,D$49+D$43)
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E56: @IF($PRIMUSEXIST=1,E$19+E$30+E$43+E$49,E$49+E$43)
F56: @IF($PRIMUSEXIST=1,F$19+F$30+F$43+F$49,F$49+F$43)
G56: @IF($PRIMUSEXIST=1,G$19+G$30+G$43+G$49,G$49+G$43)
H56: @IF($PRIMUSEXIST=1,H$19+H$30+H$43+H$49,H$49+H$43)
I56: @IF($PRIMUSEXIST=1,I$19+I$30+I$43+I$49,I$49+I$43)
B57: 'TOTAL OPV COSTS (Ft Ord)
C57: @IF($PRIMUSEXIST=1,C$50+C$44+C$38+C$36+C$28+C$26,C$50+C$44)
D57: @IF($PRIMUSEXIST=1,D$50+D$44+D$38+D$36+D$28+D$26,D$50+D$44)
E57: @IF($PRIMUSEXIST=1,E$50+E$44+E$38+E$36+E$28+E$26,E$50+E$44)
F57: @IF($PRIMUSEXIST=1,F$50+F$44+F$38+F$36+F$28+F$26,F$50+F$44)
G57: @IF($PRIMUSEXIST=1,G$50+G$44+G$38+G$36+G$28+G$26,G$50+G$44)
H57: @IF($PRIMUSEXIST=1,H$50+H$44+H$38+H$36+H$28+H$26,H$50+H$44)
I57: @IF($PRIMUSEXIST=1,I$50+I$44+I$38+I$36+I$28+I$26,I$50+I$44)
B58: 'TOTAL COST/OPV  (Ft Ord)
C58: +C57/C56
D58: +D57/D56
E58: +E57/E56
F58: +F57/F56
G58: +G57/G56
H58: +H57/H56
I58: +I57/I56
B59: 'AGGREGATE OPV
C59: +C53+C56
D59: +D53+D56
E59: +E53+E56
F59: +F53+F56
G59: +G53+G56
H59: +H53+H56
I59: +I53+I56
B60: 'AGGREGATE OPV COSTS
C60: +C54+C57
D60: +D54+D57
E60: +E54+E57
F60: +F54+F57
G60: +G54+G57
H60: +H54+H57
I60: +I54+I57
B61: 'AGGREGATE COST/OPV
C61: +C60/C59
D61: +D60/D59
E61: +E60/E59
F61: +F60/F59
G61: +OUTCOST90/G59
H61: +OUTCOST91/H59
I61: +OUTCOST92/I59
C66: 1986
D66: +C66+1
E66: +D66+1
F66: +E66+1
G66: +F66+1
H66: +G66+1
I66: +H66+1
```

```
B67: 'NAVHOSP Admissions
C67: +N24
D67: +O24
E67: @IF(($NAVCAREEXIST=1),P$24,(P$24/P$6)*E$40)
F67: @IF(($NAVCAREEXIST=1),Q$24,(Q$24/Q$6)*F$40)
G67: @IF(($NAVCAREEXIST=1),($Q$24/($F$40+$F$6))*(G$40+G$6),($Q$24/$F$40)*G$40)
H67: @IF(($NAVCAREEXIST=1),($Q$24/($F$40+$F$6))*(H$40+H$6),($Q$24/$F$40)*H$40)
I67: @IF(($NAVCAREEXIST=1),($Q$24/($F$40+$F$6))*(I$40+I$6),($Q$24/$F$40)*I$40)
B68: 'NAVHOSP Inpatient Costs
C68: +N25
D68: +O25
E68: +P25
F68: +Q25
G68: (G$67*F$69)*(1+$NAVHOSPADMCOST)
H68: (H$67*G$69)*(1+$NAVHOSPADMCOST)
I68: (I$67*H$69)*(1+$NAVHOSPADMCOST)
B69: 'NAVHOSP Cost/Admission
C69: +N25/N24
D69: +O25/O24
E69: +P25/P24
F69: +Q25/Q24
G69: +G68/G67
H69: +H68/H67
I69: +I68/I67
B70: 'HAYS Admissions
C70: +N26
D70: +O26
E70: +P26
F70: +Q26
G70:@IF(($PRIMUSEXIST=1),($Q$26/($F$43+$F$19+$F$30))*(G$43+G$19+$G$30),($Q$26/$F$43)*G$43)
H70:@IF(($PRIMUSEXIST=1),($Q$26/($F$43+$F$19+$F$30))*(H$43+H$19+$G$30),($Q$26/$F$43)*H$43)
I70:@IF(($PRIMUSEXIST=1),($Q$26/($F$43+$F$19+$F$30))*(I$43+I$19+$G$30),($Q$26/$F$43)*I$43)
B71: 'HAYS Inpatient Costs
C71: +N27
D71: +O27
E71: +P27
F71: +Q27
G71: (G$70+F$72)*(1+$HAYSADMCOST)
H71: (H$70+G$72)*(1+$HAYSADMCOST)
I71: (I$70+H$72)*(1+$HAYSADMCOST)
B72: 'HAYS Cost/Admission
C72: +N27/N26
D72: +O27/O26
E72: +P27/P26
F72: +Q27/Q26
G72: +G71/G70
H72: +H71/H70
I72: +I71/I70
B73: 'CHAMPUS Admissions (Oak)
E73: +P28
F73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*F$46)
G73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*G$46)
```

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H73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*H$46)
I73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*I$46)
B74: 'CHAMPUS Inpt Costs (Oak)
E74: +P29
F74: (F$73+E$75)*(1+$CHAMPADMCOSTOAK)
G74: (G$73+F$75)*(1+$CHAMPADMCOSTOAK)
H74: (H$73+G$75)*(1+$CHAMPADMCOSTOAK)
I74: (I$73+H$75)*(1+$CHAMPADMCOSTOAK)
B75: 'CHAMPUS Cost/Adm   (Oak)
C75: +C74/C73
D75: +D74/D73
E75: +E74/E73
F75: +F74/F73
G75: +G74/G73
H75: +H74/H73
I75: +I74/I73
B76: 'CHAMPUS Admissions (Ft Ord)
E76: +P30
F76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)*F$49)
G76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)*G$49)
H76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)*H$49)
I76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)*I$49)
B77: 'CHAMPUS Inpt Costs (Ft Ord)
E77: +P31
F77: (F$76+E$78)*(1+$CHAMPADMCOSTORD)
G77: (G$76+F$78)*(1+$CHAMPADMCOSTORD)
H77: (H$76+G$78)*(1+$CHAMPADMCOSTORD)
I77: (I$76+H$78)*(1+$CHAMPADMCOSTORD)
B78: 'CHAMPUS Cost/Adm   (Ft Ord)
C78: +C77/C76
D78: +D77/D76
E78: +E77/E76
F78: +F77/F76
G78: +G77/G76
H78: +H77/H76
I78: +I77/I76
B80: 'TOTAL ADMISSIONS
C80: +N24+C73+N26+C76
D80: +O24+D73+O26+D76
E80: +P24+E73+P26+E76
F80: +Q24+F73+Q26+F76
G80: +G67+G73+G70+G76
H80: +H67+H73+H70+H76
I80: +I67+I73+I70+I76
B81: 'TOTAL INPATIENT COSTS
C81: +N25+C74+N27+C77
D81: +O25+D74+O27+D77
E81: +P25+E74+P27+E77
F81: +Q25+F74+Q27+F77
G81: +G68+G74+G71+G77
H81: +H68+H74+H71+H77
I81: +I68+I74+I71+I77
```

```
B82: 'AGGREGATE COST/ADMISSION
C82: +C81/C80
D82: +D81/D80
E82: +E81/E80
F82: +F81/F80
G82: +INCOST90/G80
H82: +INCOST91/H80
I82: +INCOST92/I80
B84: 'TOTAL COSTS
C84: +C60+C81
D84: +D60+D81
E84: +E60+E81
F84: +F60+F81
G84: +OUTCOST90+INCOST90
H84: +OUTCOST91+INCOST91
I84: +OUTCOST92+INCOST92
```

APPENDIX I

HEALTH CARE COST MODEL

		1986	1987	1988	1989	1990	1991	1992
1	NAVCARE Visits	0	0	4797	43351	57522	72714	87906
2	NAVCARE Costs:							
2a	/Full	0	0	419840	2232576	2750941	3403906	4093867
2b	/Limited	0	0	6002	43270	59094	76954	95832
2c	/Prescriptions	0	0	18	2854	3916	5112	6377
2d	/Immunizations	0	0	379	2302	3148	4097	5095
2e	/Mammography	0	0	19245	121633	166221	216430	264590
2f	/Emergency xport	0	0	364	5648	7757	10149	12698
2g	/Less PRS deductions	0	0	0	-20918.86			
2	/Total	0	0	445847	2387366	2991077	3716647	4478458
3	NAVCARE Cost/Visit	0	0	92.94	55.07	52.00	51.11	50.95
4	NAVCARE Site Prep Amort	0	0	38283	153133	153133	153133	153133
5	Final NAVCARE cost/visit	0	0	100.92	58.60	54.66	53.22	52.69
1	PRIMUS Visits (Presidio)	0	0	16200	62184	73036	83575	94113
2	PRIMUS Costs:							
2a	/Full Visit	0	0	679031	2537584	2983539	3281123	3963034
2b	/Short Visit	0	0	11765	64237	79608	96085	114128
2c	/Dispensing Fee	0	0	2121	15032	18602	22434	26626
2d	/Immunizations	0	0	789	6573	8139	9813	11663
2e	/Optometry	0	0	15646	64157	79482	95960	159497
2	/Total	0	0	709352	2687584	3169371	3505415	4274949
3	PRIMUS Cost/Visit	0	0	43.79	43.22	43.39	41.94	45.42
4	PRIMUS Site Prep Amort	0	0	12190	48759	48759	48759	48759
5	Final PRIMUS cost/visit	0	0	44.54	44.00	44.06	42.53	45.94
1	PRIMUS Visits (Salinas)	0	0	4348	29127	40016	51993	63971
2	PRIMUS Costs:							
2a	/Full Visit	0	0	233307	1456797	1856170	2319390	2832084
2b	/Short Visit	0	0	4166	61370	88963	121921	158228
2c	/Dispensing Fee	0	0	522	8524	12339	16896	21910
2d	/Immunizations	0	0	15	467	676	926	1202
2	/Total	0	0	238011	1527159	1958148	2459133	3013424
3	PRIMUS Cost/Visit	0	0	54.74	52.43	48.93	47.30	47.11
4	PRIMUS Site Prep Amort	0	0	15796	63184	63184	63184	63184
5	Final PRIMUS cost/visit	0	0	58.37	54.60	50.51	48.51	48.09
1	NAVHOSP OPV	169029	140394	131752	159876	171513	183989	196464
2	NAVHOSP OPV Costs	10847814	11145846	11743071	14329582	15372620	16490807	17608994
3	NAVHOSP Cost/OPV	64.18	79.39	89.13	89.63	89.63	89.63	89.63
1	HAYS OPV	121861	121250	138968	198776	217206	236293	255380
2	Hays OPV Costs	4761067	6109295	6846993	9074710	9916085	10787453	11658821
3	Hays Cost/OPV	39.07	50.39	49.27	45.65	45.65	45.65	45.65
1	CHAMPUS OPV (Oak)	29095	32157	32264	39157	41691	44407	47124
2	CHAMPUS OPV Costs (Oak)	1936123	2149725	2144553	2602758	2771177	2951730	3132283
3	CHAMPUS Cost/OPV (Oak)	66.54	66.85	66.47	66.47	66.47	66.47	66.47
1	CHAMPUS OPV (Ft Ord)	15772	22275	25527	36305	39616	43045	46474
2	CHAMPUS OPV Costs (Ft Ord)	868746	1182510	1503399	2138105	2333110	2535066	2737022
3	CHAMPUS Cost/OPV (Ft Ord)	56.35	53.09	58.89	58.89	58.89	58.89	58.89
	TOTAL OPV (Oak)	198124	172551	164016	199033	213204	228396	243588
	TOTAL OPV COSTS (Oak)	12783937	13295571	13887624	16932340	18143796	19442537	20741277
	TOTAL COST/OPV (Oak)	64.52	77.05	84.67	85.07	85.10	85.13	85.15
	TOTAL OPV (Ft Ord)	137633	143525	164495	235081	256822	279338	301854
	TOTAL OPV COSTS (Ft Ord)	5649813	7291805	8350392	11212815	12249195	13322519	14395843
	TOTAL COST/OPV (Ft Ord)	41.05	50.81	50.76	47.70	47.70	47.69	47.69
	AGGREGATE OPV	335757	316076	328511	434114	470026	507734	545442
	AGGREGATE OPV COSTS	18433750	20587376	22238016	28145154	30392991	32765056	35137121
	AGGREGATE COST/OPV	54.90	65.13	67.69	64.83	64.66	64.53	64.42

HEALTH CARE COST MODEL (CONTINUED)

		1986	1987	1988	1989	1990	1991	1992
1	NAVHOSP Admissions	13419	13243	13583	17033	18272	19602	20931
2	NAVHOSP Inpatient Costs	33201981	35769091	38703835	52262608	60704041	70094163	80158920
3	NAVHOSP Cost/Admission	2474.25	2700.98	2849.41	3068.37	3322.15	3575.94	3829.72
1	HAYS Admissions	9176	8798	11904	16908	18476	20099	21723
2	HAYS Inpatient Costs	15916825	16228715	21410802	34077403	42459275	51871596	62201734
3	HAYS Cost/Admission	1734.61	1844.59	1798.61	2015.45	2298.11	2580.77	2863.43
1	CHAMPUS Admissions (Oak)	1119	1206	914	1110	1181	1258	1335
2	CHAMPUS Inpt Costs (Oak)	6167405	7966997	6202655	7527913	8015028	8537239	9059450
3	CHAMPUS Cost/Adm (Oak)	5511.53	6606.13	6784.00	6784.00	6784.00	6784.00	6784.00
1	CHAMPUS Admissions (Ft Ord)	730	1244	907	1290	1408	1530	1652
2	CHAMPUS Inpt Costs (Ft Ord)	3404122	7309907	6154567	8752907	9551213	10377976	11204739
3	CHAMPUS Cost/Adm (Ft Ord)	4663.18	5876.13	6784.00	6784.00	6784.00	6784.00	6784.00
	TOTAL ADMISSIONS	24444	24491	27309	36341	39338	42489	45641
	TOTAL INPATIENT COSTS	58690333	67274710	72471859	102620831	120729557	140880974	162624843
	AGGREGATE COST/ADMISSION	2401.01	2746.92	2653.80	2823.86	3069.06	3315.70	3563.16
	TOTAL COSTS	77124083	87862086	94709875	130765985	151122549	173646030	197761963

Projected Changes (Input Variables)	
With/without NAVCARE (1/0):	0
With/without PRIMUS (1/0):	0

CROC Visits and MTF Costs, Visits and Admissions Based on Forecasts

	Scenario #1 No CROCS	Scenario #2 W/NAVCARE	Percent Change	Scenario #3 W/PRIMUS	Percent Change	Scenario #4 BOTH CROCS	Percent Change
Total Outpatient Visits, FY 90	470026	470026	0.00%	470026	0.00%	470026	0.00%
Total Outpatient Visits, FY 91	507734	507734	0.00%	507734	0.00%	507734	0.00%
Total Outpatient Visits, FY 92	545442	545442	0.00%	545442	0.00%	545442	0.00%
Total Admissions, FY 90	39338	34014	-13.53%	30574	-22.28%	25250	-35.81%
Total Admissions, FY 91	42489	35759	-15.84%	31980	-24.73%	25250	-40.57%
Total Admissions, FY 92	45641	37504	-17.83%	33386	-26.85%	25250	-44.68%
Total Outpatient Costs, FY 90	30392991	28619735	-5.83%	30243331	-0.49%	28470074	-6.33%
Total Outpatient Costs, FY 91	32765056	30418629	-7.16%	32379101	-1.18%	30032673	-8.34%
Total Outpatient Costs, FY 92	35137121	32253764	-8.21%	35001667	-0.39%	32118310	-8.59%
Total Inpatient Costs, FY 90	120729557	101852294	-15.64%	97844829	-18.96%	79786529	-33.91%
Total Inpatient Costs, FY 91	140880974	115435787	-18.06%	110675337	-21.44%	86064804	-38.91%
Total Inpatient Costs, FY 92	162624843	129937108	-20.10%	124180480	-23.64%	92343089	-43.22%
Total Cost Per Visit, FY 90	64.66	60.89	-5.83%	64.34	-0.49%	60.57	-6.33%
Total Cost Per Visit, FY 91	64.53	59.91	-7.16%	63.77	-1.18%	59.15	-8.34%
Total Cost Per Visit, FY 92	64.42	59.13	-8.21%	64.17	-0.39%	58.88	-8.59%
Total Cost Per Admission, FY 90	3322.15	3322.15	0.00%	3322.15	0.00%	3322.15	0.00%
Total Cost Per Admission, FY 91	3575.94	3575.94	0.00%	3575.94	0.00%	3575.94	0.00%
Total Cost Per Admission, FY 92	3829.72	3829.72	0.00%	3829.72	0.00%	3829.72	0.00%
Total Cost, FY 90	151122549	130472029	-13.66%	128088160	-15.24%	108256603	-28.37%
Total Cost, FY 91	173646030	145854416	-16.00%	143054437	-17.62%	116097477	-33.14%
Total Cost, FY 92	197761963	162190872	-17.99%	159182146	-19.51%	124461399	-37.07%

FY 90	All Input Variables Set to 0	CROC Visits and MTF Costs, Visits & Admissions Based on Forecasts	Percent Change
No CROCS	96404044	151122549	56.76%
With NAVCARE Only	94728891	130472029	37.73%
With PRIMUS Only	94011996	128088160	36.25%
With Both CROCS	92336843	108256603	17.24%
FY 91			
No CROCS	96404044	173646030	80.12%
With NAVCARE Only	94801336	145854416	53.85%
With PRIMUS Only	94143601	143054437	51.95%
With Both CROCS	92540893	116097477	25.46%
FY 92			
No CROCS	96404044	197761963	105.14%
With NAVCARE Only	94876076	162190872	70.95%
With PRIMUS Only	94530605	159182146	68.39%
With Both CROCS	93002637	124461399	33.83%

APPENDIX I

FORMULAS USED WITH THE WHAT-IF MODEL VARIATION

```
B6: 'NAVCARE Visits
E6: +J168
F6: +J197
G6: +R8
H6: +S8
I6: +T8
B7: 'NAVCARE Costs:
B8: '  /Full
E8: @IF((E$6+$C114))$D114,(((E$6+$C114)-$D114)*E127)+($D114*E118),(E$6+$C114*E114))
F8: ((@IF((F$6+$C127))$D127,(((F$6+$C127)-$D127)*F127)+($D127*F114),(F$6+$C127*F114))))
G8: ((@IF((G$6+$C127))$D127,(((G$6+$C127)-$D127)*G127)+($D127*G114),(G$6+$C127*G114))))
H8: ((@IF((H$6+$C127))$D127,(((H$6+$C127)-$D127)*H127)+($D127*H114),(H$6+$C127*H114))))
I8: ((@IF((I$6+$C127))$D127,(((I$6+$C127)-$D127)*I127)+($D127*I114),(I$6+$C127*I114))))
B9: '  /Limited
E9: @IF((E$6+$C115))$D115,(((E$6+$C115)-$D115)*E128)+($D115*E119),(E$6+$C115*E115))
F9: ((@IF((F$6+$C128))$D128,(((F$6+$C128)-$D128)*F128)+($D128*F115),(F$6+$C128*F115))))
G9: ((@IF((G$6+$C128))$D128,(((G$6+$C128)-$D128)*G128)+($D128*G115),(G$6+$C128*G115))))
H9: ((@IF((H$6+$C128))$D128,(((H$6+$C128)-$D128)*H128)+($D128*H115),(H$6+$C128*H115))))
I9: ((@IF((I$6+$C128))$D128,(((I$6+$C128)-$D128)*I128)+($D128*I115),(I$6+$C128*I115))))
B10: '  /Prescriptions
E10: @IF((E$6+$C116))$D116,(((E$6+$C116)-$D116)*E129)+($D116*E121),(E$6+$C116*E116))
F10: ((@IF((F$6+$C129))$D129,(((F$6+$C129)-$D129)*F129)+($D129*F116),(F$6+$C129*F116))))
G10: ((@IF((G$6+$C129))$D129,(((G$6+$C129)-$D129)*G129)+($D129*G116),(G$6+$C129*G116))))
H10: ((@IF((H$6+$C129))$D129,(((H$6+$C129)-$D129)*H129)+($D129*H116),(H$6+$C129*H116))))
I10: ((@IF((I$6+$C129))$D129,(((I$6+$C129)-$D129)*I129)+($D129*I116),(I$6+$C129*I116))))
B11: '  /Immunizations
E11: @IF((E$6+$C117))$D117,(((E$6+$C117)-$D117)*E130)+($D117*E122),(E$6+$C117*E117))
F11: ((@IF((F$6+$C130))$D130,(((F$6+$C130)-$D130)*F130)+($D130*F117),(F$6+$C130*F117))))
G11: ((@IF((G$6+$C130))$D130,(((G$6+$C130)-$D130)*G130)+($D130*G117),(G$6+$C130*G117))))
H11: ((@IF((H$6+$C130))$D130,(((H$6+$C130)-$D130)*H130)+($D130*H117),(H$6+$C130*H117))))
I11: ((@IF((I$6+$C130))$D130,(((I$6+$C130)-$D130)*I130)+($D130*I117),(I$6+$C130*I117))))
B12:  '  /Mammography
E12: @IF((E$6+$C118))$D118,(((E$6+$C118)-$D118)*E131)+($D118*E123),(E$6+$C118*E118))
F12: ((@IF((F$6+$C131))$D131,(((F$6+$C131)-$D131)*F131)+($D131*F118),(F$6+$C131*F118))))
G12: ((@IF((G$6+$C131))$D131,(((G$6+$C131)-$D131)*G131)+($D131*G118),(G$6+$C131*G118))))
H12: ((@IF((H$6+$C131))$D131,(((H$6+$C131)-$D131)*H131)+($D131*H118),(H$6+$C131*H118))))
I12: ((@IF((I$6+$C131))$D131,(((I$6+$C131)-$D131)*I131)+($D131*I118),(I$6+$C131*I118))))
B13: '  /Emergency xport
E13: @IF((E$6+$C119))$D119,(((E$6+$C119)-$D119)*E132)+($D119*E124),(E$6+$C119*E119))
F13: ((@IF((F$6+$C132))$D132,(((F$6+$C132)-$D132)*F132)+($D132*F119),(F$6+$C132*F119))))
G13: ((@IF((G$6+$C132))$D132,(((G$6+$C132)-$D132)*G132)+($D132*G119),(G$6+$C132*G119))))
H13: ((@IF((H$6+$C132))$D132,(((H$6+$C132)-$D132)*H132)+($D132*H119),(H$6+$C132*H119))))
I13: ((@IF((I$6+$C132))$D132,(((I$6+$C132)-$D132)*I132)+($D132*I119),(I$6+$C132*I119))))
B14: '  /Less PRS deductions
E14: @IF((E$6+$C121))$D121,(((E$6+$C121)-$D121)*E133)+($D121*E125),(E$6+$C121*E121))
F14: -16086.63-2866.01-1966.22
B15: '      /Total
```

```
E15: @SUM(E8..E14)
F15: @SUM(F8..F14)
G15: @SUM(G8..G14)
H15: @SUM(H8..H14)
I15: @SUM(I8..I14)
B16:  'NAVCARE Cost/Visit
E16: +E15/E6
F16: +F15/F6
G16: +G15/G6
H16: +H15/H6
I16: +I15/I6
B17:  'NAVCARE Site Prep Amort
E17: (650814/51)*3
F17: (650814/51)*12
G17: (650814/51)*12
H17: (650814/51)*12
I17: (650814/51)*12
B18:  'Final NAVCARE cost/visit
E18: (E17+E15)/E6
F18: (F17+F15)/F6
G18: (G17+G15)/G6
H18: (H17+H15)/H6
I18: (I17+I15)/I6
B19:  'PRIMUS Visits (Presidio)
E19: +I209
F19: +I226
G19: +R16
H19: +S16
I19: +T16
B20:  'PRIMUS Costs:
B21:  '  /Full Visit
E21: @IF((E$19=$C140)$D140),(((E$19=$C140)-$D140)*H140)+($D140*G140),(E$19=$C140*G140))
F21: @IF((F$19=$E140)$F140),(((F$19=$E140)-$F140)*J140)+($F140*I140),(F$19=$E140*I140))
G21: @IF((G$19=$E140)$F140),(((G$19=$E140)-$F140)*L140)+($F140*K140),(G$19=$E140*K140))
H21: @IF((H$19=$E140)$F140),(((H$19=$E140)-$F140)*N140)+($F140*M140),(H$19=$E140*M140))
I21: @IF((I$19=$E140)$F140),(((I$19=$E140)-$F140)*P140)+($F140*O140),(I$19=$E140*O140))
B22:  '  /Short Visit
E22: @IF((E$19=$C141)$D141),(((E$19=$C141)-$D141)*H141)+($D141*G141),(E$19=$C141*G141))
F22: @IF((F$19=$E141)$F141),(((F$19=$E141)-$F141)*J141)+($F141*I141),(F$19=$E141*I141))
G22: @IF((G$19=$E141)$F141),(((G$19=$E141)-$F141)*L141)+($F141*K141),(G$19=$E141*K141))
H22: @IF((H$19=$E141)$F141),(((H$19=$E141)-$F141)*N141)+($F141*M141),(H$19=$E141*M141))
I22: @IF((I$19=$E141)$F141),(((I$19=$E141)-$F141)*P141)+($F141*O141),(I$19=$E141*O141))
B23:  '  /Dispensing Fee
E23: @IF((E$19=$C142)$D142),(((E$19=$C142)-$D142)*H142)+($D142*G142),(E$19=$C142*G142))
F23: @IF((F$19=$E142)$F142),(((F$19=$E142)-$F142)*J142)+($F142*I142),(F$19=$E142*I142))
G23: @IF((G$19=$E142)$F142),(((G$19=$E142)-$F142)*L142)+($F142*K142),(G$19=$E142*K142))
H23: @IF((H$19=$E142)$F142),(((H$19=$E142)-$F142)*N142)+($F142*M142),(H$19=$E142*M142))
I23: @IF((I$19=$E142)$F142),(((I$19=$E142)-$F142)*P142)+($F142*O142),(I$19=$E142*O142))
B24:  '  /Immunizations
E24: @IF((E$19=$C143)$D143),(((E$19=$C143)-$D143)*H143)+($D143*G143),(E$19=$C143*G143))
F24: @IF((F$19=$E143)$F143),(((F$19=$E143)-$F143)*J143)+($F143*I143),(F$19=$E143*I143))
G24: @IF((G$19=$E143)$F143),(((G$19=$E143)-$F143)*L143)+($F143*K143),(G$19=$E143*K143))
```

```
H24: @IF((H$19+$E143)$F143),(((H$19+$E143)-$F143)*N143)+($F143*M143),(H$19+$E143*M143))
I24: @IF((I$19+$E143)$F143),(((I$19+$E143)-$F143)*P143)+($F143*O143),(I$19+$E143*O143))
B25: '  /Optometry
E25: @IF((E$19+$C144)$D144),(((E$19+$C144)-$D144)*H144)+($D144*G144),(E$19+$C144*G144))
F25: @IF((F$19+$E144)$F144),(((F$19+$E144)-$F144)*J144)+($F144*I144),(F$19+$E144*I144))
G25: @IF((G$19+$E144)$F144),(((G$19+$E144)-$F144)*L144)+($F144*K144),(G$19+$E144*K144))
H25: @IF((H$19+$E144)$F144),(((H$19+$E144)-$F144)*N144)+($F144*M144),(H$19+$E144*M144))
I25: @IF((I$19+$E144)$F144),(((I$19+$E144)-$F144)*P144)+($F144*O144),(I$19+$E144*O144))
B26: '      /Total
E26: @SUM(E21..E25)
F26: @SUM(F21..F25)
G26: @SUM(G21..G25)
H26: @SUM(H21..H25)
I26: @SUM(I21..I25)
B27:  'PRIMUS Cost/Visit
E27: +E26/E19
F27: +F26/F19
G27: +G26/G19
H27: +H26/H19
I27: +I26/I19
B28:  'PRIMUS Site Prep Amort
E28: (207225/51)*3
F28: (207225/51)*12
G28: (207225/51)*12
H28: (207225/51)*12
I28: (207225/51)*12
B29:  'Final PRIMUS cost/visit
E29: (E28+E26)/E19
F29: (F28+F26)/F19
G29: (G28+G26)/G19
H29: (H28+H26)/H19
I29: (I28+I26)/I19
B30:  'PRIMUS Visits (Salinas)
E30: +H238
F30: +H255
G30: +R19
H30: +S19
I30: +T19
B31:  'PRIMUS Costs:
B32:  '  /Full Visit
E32: @IF((E$30+$C152)$D152),(((E$30+$C152)-$D152)*H152)+($D152*G152),(E$30+$C152*G152))
F32: @IF((F$30+$E152)$F152),(((F$30+$E152)-$F152)*J152)+($F152*I152),(F$30+$E152*I152))
G32: @IF((G$30+$E152)$F152),(((G$30+$E152)-$F152)*L152)+($F152*K152),(G$30+$E152*K152))
H32: @IF((H$30+$E152)$F152),(((H$30+$E152)-$F152)*N152)+($F152*M152),(H$30+$E152*M152))
I32: @IF((I$30+$E152)$F152),(((I$30+$E152)-$F152)*P152)+($F152*O152),(I$30+$E152*O152))
B33:  '  /Short Visit
E33: @IF((E$30+$C153)$D153),(((E$30+$C153)-$D153)*H153)+($D153*G153),(E$30+$C153*G153))
F33: @IF((F$30+$E153)$F153),(((F$30+$E153)-$F153)*J153)+($F153*I153),(F$30+$E153*I153))
G33: @IF((G$30+$E153)$F153),(((G$30+$E153)-$F153)*L153)+($F153*K153),(G$30+$E153*K153))
H33: @IF((H$30+$E153)$F153),(((H$30+$E153)-$F153)*N153)+($F153*M153),(H$30+$E153*M153))
I33: @IF((I$30+$E153)$F153),(((I$30+$E153)-$F153)*P153)+($F153*O153),(I$30+$E153*O153))
B34:  '  /Dispensing Fee
```

```
E34: @IF((E$30+$C154)$D154),(((E$30+$C154)-$D154)*H154)+($D154*G154),(E$30+$C154*G154))
F34: @IF((F$30+$E154)$F154),(((F$30+$E154)-$F154)*J154)+($F154*I154),(F$30+$E154*I154))
G34: @IF((G$30+$E154)$F154),(((G$30+$E154)-$F154)*L154)+($F154*K154),(G$30+$E154*K154))
H34: @IF((H$30+$E154)$F154),(((H$30+$E154)-$F154)*N154)+($F154*M154),(H$30+$E154*M154))
I34: @IF((I$30+$E154)$F154),(((I$30+$E154)-$F154)*P154)+($F154*O154),(I$30+$E154*O154))
B35: '  /Immunizations
E35: @IF((E$30+$C155)$D155),(((E$30+$C155)-$D155)*H155)+($D155*G155),(E$30+$C155*G155))
F35: @IF((F$30+$E155)$F155),(((F$30+$E155)-$F155)*J155)+($F155*I155),(F$30+$E155*I155))
G35: @IF((G$30+$E155)$F155),(((G$30+$E155)-$F155)*L155)+($F155*K155),(G$30+$E155*K155))
H35: @IF((H$30+$E155)$F155),(((H$30+$E155)-$F155)*N155)+($F155*M155),(H$30+$E155*M155))
I35: @IF((I$30+$E155)$F155),(((I$30+$E155)-$F155)*P155)+($F155*O155),(I$30+$E155*O155))
B36: '      /Total
E36: @SUM(E32..E35)
F36: @SUM(F32..F35)
G36: @SUM(G32..G35)
H36: @SUM(H32..H35)
I36: @SUM(I32..I35)
B37:  'PRIMUS Cost/Visit
E37: +E36/E30
F37: +F36/F30
G37: +G36/G30
H37: +H36/H30
I37: +I36/I30
B38:  'PRIMUS Site Prep Amort
E38: (268530/51)*3
F38: (268530/51)*12
G38: (268530/51)*12
H38: (268530/51)*12
I38: (268530/51)*12
B39:  'Final PRIMUS cost/visit
E39: (E36+E38)/E30
F39: (F36+F38)/F30
G39: (G36+G38)/G30
H39: (H36+H38)/H30
I39: (I36+I38)/I30
B40: 'NAVHOSP OPV
C40: @IF($NAVCAREEXIST=1,N$6,(N$6+(C$6*(1-$P$10))))
D40: @IF($NAVCAREEXIST=1,O$6,(O$6+(D$6*(1-$P$10))))
E40: @IF($NAVCAREEXIST=1,P$6,(P$6+(E$6*(1-$P$10))))
F40: @IF($NAVCAREEXIST=1,Q$6,(Q$6+(F$6*(1-$P$10))))
G40: @IF($NAVCAREEXIST=1,R$6,(R$6+(G$6*(1-$P$10))))
H40: @IF($NAVCAREEXIST=1,S$6,(S$6+(H$6*(1-$P$10))))
I40: @IF($NAVCAREEXIST=1,T$6,(T$6+(I$6*(1-$P$10))))
B41:  'NAVHOSP OPV Costs
C41: @IF($NAVCAREEXIST=1,N$7,(N$7/N$6)*C$40)
D41: @IF($NAVCAREEXIST=1,O$7,(O$7/O$6)*D$40)
E41: @IF($NAVCAREEXIST=1,P$7,(P$7/P$6)*E$40)
F41: @IF($NAVCAREEXIST=1,Q$7,(Q$7/Q$6)*F$40)
G41: @IF($NAVCAREEXIST=1,R$7,(R$7/R$6)*G$40)
H41: @IF($NAVCAREEXIST=1,S$7,(S$7/S$6)*H$40)
I41: @IF($NAVCAREEXIST=1,T$7,(T$7/T$6)*I$40)
B42:  'NAVHOSP Cost/OPV
```

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C42: +C41/C40
D42: +D41/D40
E42: +E41/E40
F42: +F41/F40
G42: +G41/G40
H42: +H41/H40
I42: +I41/I40
B43:  'HAYS OPV
C43: @IF($PRIMUSEXIST=1,N$14,(N$14+((C$19+C$30)*(1-$P$18))))
D43: @IF($PRIMUSEXIST=1,O$14,(O$14+((D$19+D$30)*(1-$P$18))))
E43: @IF($PRIMUSEXIST=1,P$14,(P$14+((E$19+E$30)*(1-$P$18))))
F43: @IF($PRIMUSEXIST=1,Q$14,(Q$14+((F$19+F$30)*(1-$P$18))))
G43: @IF($PRIMUSEXIST=1,R$14,(R$14+((G$19+G$30)*(1-$P$18))))
H43: @IF($PRIMUSEXIST=1,S$14,(S$14+((H$19+H$30)*(1-$P$18))))
I43: @IF($PRIMUSEXIST=1,T$14,(T$14+((I$19+I$30)*(1-$P$18))))
B44:  'Hays OPV Costs
C44: @IF($PRIMUSEXIST=1,N$15,(N$15/N$14)*C43)
D44: @IF($PRIMUSEXIST=1,O$15,(O$15/O$14)*D43)
E44: @IF($PRIMUSEXIST=1,P$15,(P$15/P$14)*E43)
F44: @IF($PRIMUSEXIST=1,Q$15,(Q$15/Q$14)*F43)
G44: @IF($PRIMUSEXIST=1,R$15,(R$15/R$14)*G43)
H44: @IF($PRIMUSEXIST=1,S$15,(S$15/S$14)*H43)
I44: @IF($PRIMUSEXIST=1,T$15,(T$15/T$14)*I43)
B45:  'Hays Cost/OPV
C45: +C44/C43
D45: +D44/D43
E45: +E44/E43
F45: +F44/F43
G45: +G44/G43
H45: +H44/H43
I45: +I44/I43
B46:  'CHAMPUS OPV       (Oak)
C46: @IF($NAVCAREEXIST=1,N$11,N$11+(C$6*$P$10))
D46: @IF($NAVCAREEXIST=1,O$11,O$11+(D$6*$P$10))
E46: @IF($NAVCAREEXIST=1,P$11,P$11+(E$6*$P$10))
F46: @IF($NAVCAREEXIST=1,$P$11,$P$11+(F$6*$P$10))
G46: @IF($NAVCAREEXIST=1,$P$11,$P$11+(G$6*$P$10))
H46: @IF($NAVCAREEXIST=1,$P$11,$P$11+(H$6*$P$10))
I46: @IF($NAVCAREEXIST=1,$P$11,$P$11+(I$6*$P$10))
B47:  'CHAMPUS OPV Costs (Oak)
C47: @IF($NAVCAREEXIST=1,N$12,((N$12/N$11)*C$46))
D47: @IF($NAVCAREEXIST=1,O$12,((O$12/O$11)*D$46))
E47: @IF($NAVCAREEXIST=1,$P$12,(($P$12/$P$11)*E$46))
F47: @IF($NAVCAREEXIST=1,$P$12,(($P$12/$P$11)*F$46))
G47: @IF($NAVCAREEXIST=1,$P$12,(($P$12/$P$11)*G$46))
H47: @IF($NAVCAREEXIST=1,$P$12,(($P$12/$P$11)*H$46))
I47: @IF($NAVCAREEXIST=1,$P$12,(($P$12/$P$11)*I$46))
B48:  'CHAMPUS Cost/OPV  (Oak)
C48: +C47/C46
D48: +D47/D46
E48: +E47/E46
F48: +F47/F46
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```
G48: +G47/G46
H48: +H47/H46
I48: +I47/I46
B49: 'CHAMPUS OPV       (Ft Ord)
C49: @IF($PRIMUSEXIST=1,N$22,N$22+((C$19+$P$18)+(C$30+$P$18)))
D49: @IF($PRIMUSEXIST=1,O$22,O$22+((D$19+$P$18)+(D$30+$P$18)))
E49: @IF($PRIMUSEXIST=1,$P$22,$P$22+((E$19+$P$18)+(E$30+$P$18)))
F49: @IF($PRIMUSEXIST=1,$P$22,$P$22+((F$19+$P$18)+(F$30+$P$18)))
G49: @IF($PRIMUSEXIST=1,$P$22,$P$22+((G$19+$P$18)+(G$30+$P$18)))
H49: @IF($PRIMUSEXIST=1,$P$22,$P$22+((H$19+$P$18)+(H$30+$P$18)))
I49: @IF($PRIMUSEXIST=1,$P$22,$P$22+((I$19+$P$18)+(I$30+$P$18)))
B50: 'CHAMPUS OPV Costs (Ft Ord)
C50: @IF($PRIMUSEXIST=1,N$23,((N$23/N$22)*C$49))
D50: @IF($PRIMUSEXIST=1,O$23,((O$23/O$22)*D$49))
E50: @IF($PRIMUSEXIST=1,$P$23,(($P$23/$P$22)*E$49))
F50: @IF($PRIMUSEXIST=1,$P$23,(($P$23/$P$22)*F$49))
G50: @IF($PRIMUSEXIST=1,$P$23,(($P$23/$P$22)*G$49))
H50: @IF($PRIMUSEXIST=1,$P$23,(($P$23/$P$22)*H$49))
I50: @IF($PRIMUSEXIST=1,$P$23,(($P$23/$P$22)*I$49))
B51: 'CHAMPUS Cost/OPV  (Ft Ord)
C51: +C50/C49
D51: +D50/D49
E51: +E50/E49
F51: +F50/F49
G51: +G50/G49
H51: +H50/H49
I51: +I50/I49
B53: 'TOTAL OPV       (Oak)
C53: @IF($NAVCAREEXIST=1,C$46+C$40+C$6,C$46+C$40)
D53: @IF($NAVCAREEXIST=1,D$46+D$40+D$6,D$46+D$40)
E53: @IF($NAVCAREEXIST=1,E$46+E$40+E$6,E$46+E$40)
F53: @IF($NAVCAREEXIST=1,F$46+F$40+F$6,F$46+F$40)
G53: @IF($NAVCAREEXIST=1,G$46+G$40+G$6,G$46+G$40)
H53: @IF($NAVCAREEXIST=1,H$46+H$40+H$6,H$46+H$40)
I53: @IF($NAVCAREEXIST=1,I$46+I$40+I$6,I$46+I$40)
B54: 'TOTAL OPV COSTS (Oak)
C54: @IF($NAVCAREEXIST=1,C$15+C$17+C$41+C$47,C$47+C$41)
D54: @IF($NAVCAREEXIST=1,D$15+D$17+D$41+D$47,D$47+D$41)
E54: @IF($NAVCAREEXIST=1,E$15+E$17+E$41+E$47,E$47+E$41)
F54: @IF($NAVCAREEXIST=1,F$15+F$17+F$41+F$47,F$47+F$41)
G54: @IF($NAVCAREEXIST=1,G$15+G$17+G$41+G$47,G$47+G$41)
H54: @IF($NAVCAREEXIST=1,H$15+H$17+H$41+H$47,H$47+H$41)
I54: @IF($NAVCAREEXIST=1,I$15+I$17+I$41+I$47,I$47+I$41)
B55: 'TOTAL COST/OPV  (Oak)
C55: +C54/C53
D55: +D54/D53
E55: +E54/E53
F55: +F54/F53
G55: +G54/G53
H55: +H54/H53
I55: +I54/I53
B56: 'TOTAL OPV       (Ft Ord)
```

```
C56: @IF($PRIMUSEXIST=1,C$19+C$30+C$43+C$49,C$49+C$43)
D56: @IF($PRIMUSEXIST=1,D$19+D$30+D$43+D$49,D$49+D$43)
E56: @IF($PRIMUSEXIST=1,E$19+E$30+E$43+E$49,E$49+E$43)
F56: @IF($PRIMUSEXIST=1,F$19+F$30+F$43+F$49,F$49+F$43)
G56: @IF($PRIMUSEXIST=1,G$19+G$30+G$43+G$49,G$49+G$43)
H56: @IF($PRIMUSEXIST=1,H$19+H$30+H$43+H$49,H$49+H$43)
I56: @IF($PRIMUSEXIST=1,I$19+I$30+I$43+I$49,I$49+I$43)
B57:  'TOTAL OPV COSTS (Ft Ord)
C57: @IF($PRIMUSEXIST=1,C$50+C$44+C$38+C$36+C$28+C$26,C$50+C$44)
D57: @IF($PRIMUSEXIST=1,D$50+D$44+D$38+D$36+D$28+D$26,D$50+D$44)
E57: @IF($PRIMUSEXIST=1,E$50+E$44+E$38+E$36+E$28+E$26,E$50+E$44)
F57: @IF($PRIMUSEXIST=1,F$50+F$44+F$38+F$36+F$28+F$26,F$50+F$44)
G57: @IF($PRIMUSEXIST=1,G$50+G$44+G$38+G$36+G$28+G$26,G$50+G$44)
H57: @IF($PRIMUSEXIST=1,H$50+H$44+H$38+H$36+H$28+H$26,H$50+H$44)
I57: @IF($PRIMUSEXIST=1,I$50+I$44+I$38+I$36+I$28+I$26,I$50+I$44)
B58:  'TOTAL COST/OPV  (Ft Ord)
C58: +C57/C56
D58: +D57/D56
E58: +E57/E56
F58: +F57/F56
G58: +G57/G56
H58: +H57/H56
I58: +I57/I56
B59:  'AGGREGATE OPV
C59: +C53+C56
D59: +D53+D56
E59: +E53+E56
F59: +F53+F56
G59: +G53+G56
H59: +H53+H56
I59: +I53+I56
B60:  'AGGREGATE OPV COSTS
C60: +C54+C57
D60: +D54+D57
E60: +E54+E57
F60: +F54+F57
G60: +G54+G57
H60: +H54+H57
I60: +I54+I57
B61:  'AGGREGATE COST/OPV
C61: +C60/C59
D61: +D60/D59
E61: +E60/E59
F61: +F60/F59
G61: +OUTCOST90/G59
H61: +OUTCOST91/H59
I61: +OUTCOST92/I59
C66: 1986
D66: +C66+1
E66: +D66+1
F66: +E66+1
G66: +F66+1
```

```
H66: +G66+1
I66: +H66+1
B67: 'NAVHOSP Admissions
E67: @IF($NAVCAREEXIST=1,P$24,(P$24/P$6)*E$40)
F67: @IF($NAVCAREEXIST=1,Q$24,(Q$24/Q$6)*F$40)
G67: @IF($NAVCAREEXIST=1,R$24,(R$24/R$6)*G$40)
H67: @IF($NAVCAREEXIST=1,S$24,(S$24/S$6)*H$40)
I67: @IF($NAVCAREEXIST=1,T$24,(T$24/T$6)*I$40)
B68: 'NAVHOSP Inpatient Costs
C68: 33201981
D68: 35769091
E68: @IF($NAVCAREEXIST=1,P$25,(P$25/P$24)*E67)
F68: @IF($NAVCAREEXIST=1,Q$25,(Q$25/Q$24)*F67)
G68: @IF($NAVCAREEXIST=1,R$25,(R$25/R$24)*G67)
H68: @IF($NAVCAREEXIST=1,S$25,(S$25/S$24)*H67)
I68: @IF($NAVCAREEXIST=1,T$25,(T$25/T$24)*I67)
B69: 'NAVHOSP Cost/Admission
C69: +C68/C67
D69: +D68/D67
E69: +E68/E67
F69: +F68/F67
G69: +G68/G67
H69: +H68/H67
I69: +I68/I67
B70: 'HAYS Admissions
E70: @IF($PRIMUSEXIST=1,P$26,(P$26/P$14)*E43)
F70: @IF($PRIMUSEXIST=1,Q$26,(Q$26/Q$14)*F43)
G70: @IF($PRIMUSEXIST=1,R$26,(R$26/R$14)*G43)
H70: @IF($PRIMUSEXIST=1,S$26,(S$26/S$14)*H43)
I70: @IF($PRIMUSEXIST=1,T$26,(T$26/T$14)*I43)
B71: 'HAYS Inpatient Costs
E71: @IF($PRIMUSEXIST=1,P$27,(P$27/P$26)*E70)
F71: @IF($PRIMUSEXIST=1,Q$27,(Q$27/Q$26)*F70)
G71: @IF($PRIMUSEXIST=1,R$27,(R$27/R$26)*G70)
H71: @IF($PRIMUSEXIST=1,S$27,(S$27/S$26)*H70)
I71: @IF($PRIMUSEXIST=1,T$27,(T$27/T$26)*I70)
B72: 'HAYS Cost/Admission
C72: +C71/C70
D72: +D71/D70
E72: +E71/E70
F72: +F71/F70
G72: +G71/G70
H72: +H71/H70
I72: +I71/I70
B73: 'CHAMPUS Admissions (Oak)
E73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*E$46)
F73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*F$46)
G73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*G$46)
H73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*H$46)
I73: @IF($NAVCAREEXIST=1,$P$28,($P$28/$P$11)*I$46)
B74: 'CHAMPUS Inpt Costs (Oak)
E74: @IF($NAVCAREEXIST=1,$P$29,($P$29/$P$28)*E73)
```

```
F74: (F$73+E$75)
G74: (G$73+F$75)
H74: (H$73+G$75)
I74: (I$73+H$75)
B75: 'CHAMPUS Cost/Adm   (Oak)
C75: +C74/C73
D75: +D74/D73
E75: +E74/E73
F75: +F74/F73
G75: +G74/G73
H75: +H74/H73
I75: +I74/I73
B76: 'CHAMPUS Admissions (Ft Ord)
E76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)+E$49)
F76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)+F$49)
G76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)+G$49)
H76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)+H$49)
I76: @IF($PRIMUSEXIST=1,$P$30,($P$30/$P$22)+I$49)
B77: 'CHAMPUS Inpt Costs (Ft Ord)
E77: @IF($NAVCAREEXIST=1,$P$29,($P$29/$P$28)+E76)
F77: (F$76+E$78)
G77: (G$76+F$78)
H77: (H$76+G$78)
I77: (I$76+H$78)
B78: 'CHAMPUS Cost/Adm   (Ft Ord)
C78: +C77/C76
D78: +D77/D76
E78: +E77/E76
F78: +F77/F76
G78: +G77/G76
H78: +H77/H76
I78: +I77/I76
B80: 'TOTAL ADMISSIONS
C80: +C67+C73+C70+C76
D80: +D67+D73+D70+D76
E80: +E67+E73+E70+E76
F80: +F67+F73+F70+F76
G80: +G67+G73+G70+G76
H80: +H67+H73+H70+H76
I80: +I67+I73+I70+I76
B81: 'TOTAL INPATIENT COSTS
C81: +C68+C74+C71+C77
D81: +D68+D74+D71+D77
E81: +E68+E74+E71+E77
F81: +F68+F74+F71+F77
G81: +G68+G74+G71+G77
H81: +H68+H74+H71+H77
I81: +I68+I74+I71+I77
B82: 'AGGREGATE COST/ADMISSION
C82: +C81/C80
D82: +D81/D80
E82: +E81/E80
```

```
F82: +F81/F80
G82: +INCOST90/G80
H82: +INCOST91/H80
I82: +INCOST92/I80
B84: 'TOTAL COSTS
C84: +C60+C81
D84: +D60+D81
E84: +E60+E81
F84: +F60+F81
G84: +OUTCOST90+INCOST90
H84: +OUTCOST91+INCOST91
I84: +OUTCOST92+INCOST92
```

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23. Solicitation/Contract # DADA10-88-D-0011, between Sisters of Charity of the Incarnate Word Health Care System, Houston, TX, and Commander, HSC Acquisition Agency.

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